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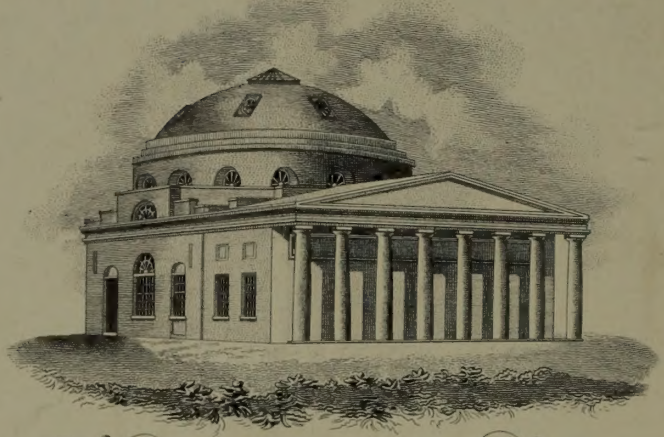

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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UNIVERSITY OF MARYLAND

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Posey, Cataldus	Inflammations of the Pelvic Tissues[2]	(no title page, ~~gutter binding~~)
Evans, Richard D.	Diphtheria	
Weber, Howard R.	Eclampsia Puerperalis	(no title page)
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[1] Noteworthy charts of vital signs.

2 Text lost in inner margin during binding process.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Notes
Haile, J.	Opium	
Patton, J. William	Bronchitis[2]	
Wolfe, William H.	Pneumonia	(no title page)

[2] Title page at the end of thesis.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1886(e)

Black, J. ~~C.~~ Cyrus	Malarial Fever	26p.
Anonymous	Fever	20p.
Meredith, G. E.	Clinical Reports	40p.
Posey, ~~O.~~ Cataldus H.	Inflamations of the Pelvic Tissues	29p.
Evans, ~~R.~~ Richard D.	Diphtheria	45p.
Weber, ~~H.~~ Howard R.	Eclampsia Puerperalis	27p.
Walker, Allen	Pneumonia	33p.
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A Thesis on Malarial Fever by J. C. Black,

1886

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An endemic-febrile and sporadic disease, marked by periodicity of paroxysms, occurring in autumn and fall, more especially from June to November.

It is not contagious, not communicable from man to man, nor does it spread from a centre successively invading town after town and country after country.

It is strictly an Endemic affection, belonging to certain districts, and induced in them by some peculiarity which pervades them.

It probably is due to a germ.

togamous fungi which requires for its developement a porous soil, a certain amount of warmth, moisture and vegetable decomposition and consequently is found in low lands along streams; and as requires for developement a temperature of from 60° 80° is more rife as you approach the equator temperature below 32°F is destructive to it, so also is very high temperature.

It has been noticed in sections where malaria had not appeared for years to suddenly reappear when there was

much upturning of soil and exposure to sun, is diffusible in air and immunates principally if not entirely at night and cool of evening and morning. heat of sun seems to prevent its diffusion, and if persons will protect themselves from atmosphere then they need not fear an attack and also avoiding drinking water contaminated with poison.

It may be carried by atmosphere to hight of from 900 ft 1500 ft. and by brisk wind be carried three or four miles. a crew were anchored four

miles at sea were exposed to brisk wind from shore Malaria being rife at time they contracted it.

Persons living at greater hight than 1500 ft are not exempt from its effects. it is supposed to be developed at much greater hight but is then not diffused in air but is heavier than air and is deposited upon ground when liberated and chief source of infection is through drinking water.

The poison seems to be absorbed by water, it is claimed

that a stream three-fourths or a mile wide will give immunity if between a malarious and non-malarious district unless there be a brisk breeze from malarious region. A grove of trees with dense foliage serve same purpose.

Drainage and cultivation of those malarious regions seems to destroy poison, and those portions that cannot be profitably cultivated in extreme southiern states, may be drained by Eucalyptus tree, which requires an enormous

requirement of water for its sustenance, and the dense foliage will absorb the moisture that may be precipitated.

The Sunflower affords to the colder sections in which the Eucalyptus cannot be grown, about the same protection, it probably can be grown in any section that affords enough warmth and moisture to produce malarial poisons.

No one is exempt from the influences, though the negro seems to be somewhat less susceptible and persons of a

malarious region seem to enjoy an immunity which persons of a non malarious region do not.

Children are thought not to contract it under three and a half years, unless it be through mother, one case recorded where child suffered with the quotidian form within first week but tertian is most common form in children. the mother was suffering from malarial fever at time of delivery, suppose that it is transmitted through circulation, is thought that it

might be transmitted through milk but it is not generally accepted.

It has a period of latency varying from few hours to several months. when this latent period is so long it is probably due to good state of health is developed when health becomes impaired.

Malarial fever is divided into two forms. Intermittent and Remittent which may pass the one into the other by insensible gradation the former is mild: the later is of greater severity and danger

Intermittent fever is characterized by the occurrence of febrile attacks of some hours duration, separated by periods of apparently, or at all events comparatively good health.

The patient is attacked suddenly or after having complained for some indefinite time of lassitude, headache, and general malaise, with a sense of chilliness and weariness, muscular pains and epigastric discomfort. The chilliness rapidly increases until the patient feels and looks as if he were suffering from intense cold;

it begins to shiver, this sensation of shivering begins in the back and extending thence to rest of body; the shivering is speedily converted into a severe rigor, attended with violent chattering of teeth and convulsive tremblings of trunk and limbs; at the same time the skin is dry, and assumed the peculiar condition known as goose's skin; the face, hands and feet acquire a dusky hue, the face also looking pinched, the hands and feet shrunken and wrinkled. Whilst this condition

Later the pulse is small, frequent and often irregular; respiration is quick and sighing: there is loss of appetite and thirst and epigastric oppression not infrequently associated with sickness: the tongue is probably bluish and coated slightly: sometimes torpor or drowsiness: the urine is pale abundant and passed frequently. The length of this the cold stage presents great variety. In severe cases it is represented by a slight sensation of shiverings a few minutes duration only: it more commonly

ly lasts from one half to one or two hours, and is occasionally prolonged to three or four hours or even more. During orbits of this stage the temperature is above the normal, and rises rapidly. The elevation begins before the patient himself recognizes the commencement of his attack, and rises quickly and uniformly until toward the close of the stage; at which time, even though he be still trembling violently with the feeling of intense cold, his axilary temperature will be probably 105. 106. 106.5° F.

The hot stage succeeds the cold. The rigors and chilliness gradually disappear, slight flushes at first alternating with the diminishing rigors and then by degrees replacing them: the patient begins to feel comfortably warm and the shrivelled and livid surface assumes the smoothness and busy health: but gradually the feeling of heat gets intense: the patient looks excited and flushed: the skin feels dry, hot, harsh, and pungently hot: the pulse becomes fuller, stronger and soft, but maintains its frequency: the respirations

get more rapid and deeper and the thirst more severe. nausea is continued. the urine is still abundant. but of a darker color and higher specific gravity: and the headaches. which differe in character from that previously complained of. become extreme. mental confusion is not uncommon. and occasionally there is delirium

During this stage the temperature continues high: sometimes during the early part attaining a higher elevation than was reached during cold stage. sometimes on other hand

falling below it. The hot stage lasts from one or two hours to four or five but is occasionally prolonged to eight or ten hours.

The hot stage is succeeded by the third or sweating stage: the approach of this is indicated by the supervention of a general feeling of comfort: the intense heat of skin diminishes somewhat and moisture appears on back of head and neck and rapidly involves the whole surface of the body: soon the patient is bathed in profuse sweat: the temperature rapidly falls: the pulse becomes less frequent and

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softer: the respiration resumes
their normal rate; the head-
ache disappears: the loss of
appetite and thirst abates: the urine
gets scanty, but of variable
color, and deposits a sed-
iment upon cooling; and
not unfrequently the pa-
tient is so much relieved
that he falls into a gentle
sleep. The duration of this stage
is very various, but is generally
shorter than either of the other two.
On emerging from it the
patient may still be lan-
guid and listless, but on the
whole appears to be restored

to more or less perfect health.

The duration of the three stages is very variable, may be over in an hour or may be prolonged to ten or twelve hours.

The cold stage may last from a few minutes to several hours, and not unfrequently the shorter cold stage is followed by the longer and more intense hot stage. Although the hot stage, which is often of some hours duration, is absent, the sweating stage in such cases following immediately upon the cold stage; and the sweating stage may be so slight as al-

most to escape notice or may be protracted for many months.

The period which elapses between one attack and that of the attack which is next in sequence is termed the interval; and it is from the length of these intervals that the different varieties are determined.

In one variety there is an interval of twenty-four hours in which there is a paroxysm and is termed quotidian.

In another the paroxysm is every forty-eight hours. The tertians have also the quartan. and occasionally most double tertians

and double quartans.

Remittent is most common-
ly met in tropics, is much
more serious and dangerous
to life than intermittent.
It is distinguished by febrile
paroxysms, which come on
once or twice a day, and not
separated from one another
by intermissions of complete
apyrexia, but are rather to be
regarded as exacerbations of
an abiding febrile state. The
cold stage is always of short du-
ration, sometimes indicated by
a few minutes only of shivering
or chilliness, and sometimes esca-

ping recognition: the hot stage is much prolonged, lasting from six to twelve hours; the sweating stage is imperfectly developed, and merges into the period of remission from which it is undistinguishable. The attack is sometimes sudden, but is more commonly preceded by premonitory symptoms, such as chilliness, lassitude, loss of appetite, nausea, epigastric uneasiness and pains in head and limbs.

The actual febrile paroxysm begins with a rigor or slight chilliness, to which the hot stage

speedily succeeded, and after some hours ended in perspiration and period of remission. The remission like the last stage, varying in length from two or three to ten or twelve hours. The paroxysm usually increases in intensity day by day for a few days. The symptoms which the patient presents are for the most part like those which attend intermittent, but worse and much more severe. The temperature is no greater than in intermittent but it does not fall to normal.

during the remission. There is no difference in pulse except as disease advances they become quicker and weaker. Sickness is much more marked during the hot stage of remittent than corresponding stage of intermittent. may have hæmatemesis. The tongue is dry and occasionally there is slight jaundice. headache and pains in limbs are more intense. confusion of intellect is more common, and drowsiness, delirium and coma are not uncommon. The patient often passes into a distinct typhoid condition.

The effects of the poison are not always the same. There are cases in which the paroxysm is prolonged and the temperature is actually lowered or in others the sweating stage comes on early and is profuse and of long duration during which the temperature is lowered, in others may have coma or delirium, epileptiform or tetanoid convulsions during hot or cold stage and continue until establishment of the sweating stage, in others may have hemorrage from nose, stomach bowels, bladder and frequently

from vagina in convulsions.

It also produces various neuroses. the most essential is neuralgia of one of branches of fifth nerve.

Treatment, Hygienic, Prophylactic and Medicinal- when in malarious district avoid exposure to atmospheres during night late in evenings and mornings and drinking water contaminated with poisons; should it be impossible to protect themselves may find a shield in a daily use of minute doses of Quinine & Arsenic. When system has become impregnated with poison

it is necessary to use remedies in large dose, Quinine and Arsenic are specifics if properly managed. If seen in early stage when nausea exists may give relief by administration of gr x. Ipecacuanha in warm water, and may be necessary to give an aperient especially if Quinine is to be used by stomach as the presence of bile in stomach and intestines prevents the absorbtion or give it in an acidulous solution; when you have reason to expect prolonged paroxysm, should use stimulants, hot applications to extrem-

ities, inhalation of Nitrite of Amel
or Morphia hypodermically.
There being less poison in sys-
tem just after paroxysm will
controll more readily by admin-
istring large dose of Quinine
about close of sweating stage:
Sul- or Bisulphate grx- and repeat
about two hours before expected
paroxysm: do not continue large
doses longer than you have
reason to belive the paroxysms
have been checked: should con-
tinue in gr iij doses T.D. for four or
five days. In remittent more
energetic treatment is called
for, should give Quinine with-

out delay, get better result from hypodermic use - in mild cases when nausea exists may give comfort by glass of warm water to evacuate stomach or some effervescent drinks. Morphia hypodermically or Chloroform m ij - iij suspended in ℥ij simple syrup by stomach.

1886

F E V E R.

Its Etiology, Mechanism, Effects,

Treatment.

Fever, which has from all time claimed the earnest attention of our profession, remains still a question of paramount importance.

The practical physician and pathologist now, as in the days of Hippocrates and Galen, are equally concerned in a clear understanding of its etiology and influence on human health. There is not a day of our professional lives that is not largely expended in its observation; in battling with its ravages; and but too often in witnessing its destructive effects. While this subject has enlisted the most earnest attention of the profession for thousands of years there never has been a period in our history in which the minds of medical men have been more closely engaged in its scientific observation and study than during the past few years. So vast are the importance and the varied connections of fever with disease that scarcely any malady hurtful to life is devoid of it. If it were possible to divest disease of this single phenomenon we

could in a great majority of cases become masters of the situation and promptly control morbid action.

More than fifteen centuries ago Galen, one of the greatest intellects which ever existed in any age, pronounced fever to be nothing more nor less than a preternatural degree of corporeal heat. Recent observations and experiments, conducted with the utmost care and scientific accuracy by the most learned pathologists of our time, have confirmed very nearly what old Galen said in the far distant past. We may have all the other accompanying phenomena of fever, as increased frequency of pulse, nervous excitement, delirium, suppression of secretion, and restlessness, without this condition; but a rise of temperature of the body of only a single degree for any length of time denotes the presence of fever.

The question now arises whether the knowledge derived from the scientific research of fifteen hundred years has really advanced our ideas of the pathology of fever beyond the problem of Galen. I think in reviewing the labors of the great men who have assisuously devoted their time to the study of this subject we will see that the fact has been confirmed that we have made vast additions to our knowledge of the etiology, the mechanism, the effects, and finally of the means of correcting fever.

Etiology of Fever.---Heretofore authors have divided the subject of fever into two great leading classes as indicative of origin. One, the idiopathic variety, supposed to originate entirely from general causes; the other variety, the symptomatic, being attributable alone to local inflammatory action. For years, probably, the so-called symptomatic fever of local inflamation was thought to be due to the sympathetic action of the nervous system from irritation induced by the local affection.

Of course these views, however honored by long and established usage, are very indefinite and obscure. Irritation, whether we mean excitement either febrile or nervous is a term which is far from being explicit. The weight of authority now preponderates decidedly in favor of the opinion that the symptomatic fever arising from local inflammatory action is as much due to the introduction within the circulation of septic material as may be the case in fever caused by the absorption of infectious poison of wounds. If this be true it becomes a fact that all forms of symptomatic fever, whether simple or malignant, are true examples of septicaemia, only differing in the type of their malignancy. During the progress of phthisis, pneumonitis, erysipelas, peritonitis, diptheritis, and so on to the end of the list of local in-

flammations, there must of necessity be a constant absorption by the circulation of the debris of disorganized blood constituents, as the white and red corpuscles, febrin and albumen, and also the broken down tissues, the result of destructive local inflammatory action, which, acting as septic agents, set up fermentative, and in malignant cases, putrefactive action in the circulating fluids. Just as in fruit when ripening on the tree a minute center of fermentative action appears, and as it infects contiguous atoms radiates in all directions, ultimately extending through the entire living mass, causes universal putrefaction and then follows decay. These processes are all accompanied with the evolution of heat. This is true of vegetable septicaemia as of animal. It may originate from an injury, from frost, dampness or the infection of an insect,and in many respects is not unlike that in the animal body. In our study of septicaemia in the human system we may learn a valuable lesson from that in the vegetable organism.

The inflammatory process in the human system means the disintegration of a certain amount of inflamed tissue and the destruction and death of a certain amount of blood materials, as the red and white corpuscles, fibrin and albumen, which, if not liberated by what is called the suppurative process, are retained, ab-

sorbed and circulated throughout the system, inducing fermentation, and often putrefactive action, and what is known as blood poisoning with an increased evolution of heat. The marked relief afforded to inflammatory fevers by the collection and free evacuation of common pus is due to the fact that the broken down tissues and blood materials in place of being absorbed into the system are promptly expelled. Thus it is that there can scarcely be an inflammation, however insignificant, without causing some degree of blood sepsis. By fermentative action blood is rendered partially unfit for nutrition, while by putrefactive action it is rendered entirely unfit for that purpose. Experiment proves that it only requires an infinitismal quantity of dead animal matter in the circulation to induce blood poisoning and fever when introduced artificially. When we reflect for a moment how much of dead animal matter is introduced into the system during the progress of every attack of inflammation with its blood poisoning and fever and the efforts of nature to produce elimination, we need not be astonished at the universal disturbance and prostration which often result from the slightest local inflammation. In health the blood must be absolutely free of all septic matter. Hence there cannot enter into the circulation the most minute quantity of septic material

without inducing septicaemia and fever.

In phthisis pulmonalis we have a most interesting example of protracted or chronic septicaemic fever, in which it may be that for years there is a daily introduction of septic matter into the system from the diseased lung, sustaining the febrile action as long as the septic poison continues to be furnished.

After reviewing the numerous varieties of inflammatory affection, with their varied types, and the many forms of blood poisoning, as the infectious, contagious, malarial, miasmatic, all of which give rise to fever, impairment of the process of nutrition, and which tend to destroy the vital and nutritive properties of the blood, it is not difficult to perceive that all forms of fever are but the results of the introduction into the circulating mass of a septic poison, either impalpable as that derived from malaria, or infection, or palpable, as that furnished the system from the destructive efforts of local inflammation. We have the strongest evidence for the belief that all fevers are really the results at last of blood poisoning, either from local causes or those of a general character. We are thus enabled to form an adequate conception of the vast number and variety of type and form of the numerous kinds of blood poisoning to which the human system

is liable; some very simple in character, easily eliminated, others very malignant and destructive.

Action of a High Degree of External Heat on the Human Body.---Prof. H. C. Wood, in his great work on fever says: "That high temperature is capable of causing most fatal nutritive disturbance of almost every tissue, is therefore shown not only by experiment upon the lower animals, but also by the natural (if the expression be allowable) experiment of sunstroke." He in this connection furthermore says: "External heat applied to the body of the normal animal so as to elevate the temperature produces derangement of the functions of innervation, of circulation, of nutrition, and secretion similar to those seen in natural fever." These conclusions, reached not only by Prof. Wood and others of the hughest authority, after the most careful experimentation, appear to settle a most important point in the pathological history of fever, viz: that all of its essential morbid phenomena may be caused by a rise of a few degrees of temperature, either from internal or external sources.

In illustration of these views Dr. Wood cites two interesting cases of hyperpyrexia, one from sunstroke, the other from acute rheumatism, the temperature in each case reaching about 108

degrees. In both cases the application of a bath at 60 degrees reduced the bodily temperature to 98½ degrees, relieved the cerebral oppression, reduced the pulse rate to the normal standard and restored the secretions. Now here was a case of hyperpyrexia from external or solar heat and another case of equally high temperature from internal heat caused by acute disease, relieved with equal promptness by a simple withdrawal of the excess of bodily heat.

These interesting and important facts not only place us far in advance of the views held in former times, but teach us the valuable lesson that by using the simple and abundant means given us for refrigerating the body when at an abnormally high temperature, we are really inducing a potent curative effect.

Wood, in commenting further, on these two cases, says again: "It would appear to follow as a corollary to these propositions that bodily temperature of excessive degree is the essential symptom of fever. Thus we observe the idea of excessive heat being the essential sympton of fever running throughout its entire history from the time of Galen, who first gave us a really intelligent account of it, to the present day. But in this there is a vast difference between then and now. We know now that either

solar or artificial heat when applied to the body in excess will produce every single characteristic of fever, just as we see follow increased bodily temperature, whether in idiopathic or symptomatic fever.

Liebermeister, of Germany, after a most elaborate system of experiments by subjecting small animals to a continuous artificial temperature of 104 degrees during a period of from four to six weeks, found the tissues of these animals to have undergone fatty degeneration and softening and the blood in a state of fluidity similar in every respect to the morbid changes seen after typhoid fever, not excepting ulceration of the bowels.

Further on in the progress of his experiments Prof. Wood propounds the following questions: "What is the mechanism by which the production and dissipation of animal heat is regulated in the system?

Secondly, "Is the rise of temperature in fever due to the excessive retention, or the abnormal production of heat, or to both conjointly?"

These two questions have long and arduously engaged the attention of scientific men, but have never been clearly settled until recently by the united labors of Bonnyman, of Scotland; Sun-

derson, of England; Leibermeister, of Germany; and Wood, of America.

The normal temperature of the human body stands at about 98 degrees under all circumstances not calculated to impair seriously or to destroy vitality. We know that animal heat is the chemical result of oxidation of the solids and fluids of the organism.

But the amount of oxygen taken in is constantly liable to variation. The amount of oxidizable material also received into the system varies every day of our lives. When the variations in the amount of the two great factors necessary to produce animal heat are so frequent in occurrence there must be some inherent power to regulate the production and dissipation of heat in the body beyond the mere chemical act of oxidation. Otherwise any slight deviation either in the production or dissipation of heat at any time would amount to fever.

The vast amount of information relative to this subject acquired by scientific men in their researches and experiments all goes to prove that the power to control and regulate the production and dissipation of heat resides in the nervous system, and especially in that great division termed the sympathetic.

Sir Benj. Brodie long since found that when the cervical portion of the spinal cord was divided the body was liable to extreme variations in the retention and dissipation of heat. Modern investigators, as Wood, Perinaud, Sanderson, and Leyden, have come to the conclusion that wounds of the medulla oblongata so situated as to paralyze the vaso-motor centers, cause decreased heat production with usually primarily increased heat dissipation.

Most of the modern pathologists who have given much attention to this subject have reached the conclusion that the origin of the sympathetic and vaso-motor system of nerves at the base of the brain, constitutes what they term an "innibitory center" which acts as a controlling power over the heat generating functions, regulating and repressing its undue production, maintaining the normal heat standard not only by this means, but also regulating the important act of heat dissipation. This constitutes a power not only to regulate chemical action in the system for the generation of heat, but also to increase or diminish heat radiation by acting on the circulation of the blood through the vaso-motor system.

The vaso-motor system of nerves possess the power of regulating the supply of blood either to the entire body or to any

organ or part, by causing either contraction or dilation of the blood vessels and in this way regulating the dissipation of heat. Spasm of the vaso-motor nerves invariably causes vascular contraction and retention of heat. This state of affairs is observed in fever. On the contrary paresis, or partial paralysis of these nerves, induces vascular dilatation and a rapid loss of heat, and usually copious perspiration. This is the condition seen in Asiatic cholera.

The peculiar mechanism by which the vaso-motor and sympathetic centers act in diminishing or increasing the amount of heat in fever is, of course, through their influence on the arteries and capillaries. It is by this spasmodic action on the arteries that we have tension of pulse and that peculiar firmness and hardness of the artery which we observe in high grades of inflammatory fever. On the contrary paresis of these nerves produces that soft, relaxed, feeble pulse which is seen in states of great relaxation and prostration attended with loss of heat. Thus it is that a general spasmodic state of the vaso-motor nerves induces universal contraction of the cutaneous arterioles, and, of course, suspension of heat dissipation, heat retention, and increased pyrexia. On the other hand, as before stated, universal paralysis or depression of these nerves induces general relaxation of the

vascular system and rapid heat dissipation as in cholera and malignant diphtheria. In the algid type of diphtheria we have absolute vaso-motor paresis and a rapid heat loss, which is dangerous to life.

In high grades of fever also there is manifestly spasmodic excitement of the vaso-motor and sympathetic systems and tense contraction of the external and internal capillaries, as is denoted in the partial suspension of the secretions.

Such is this contractive force in the arterioles, though the cardiac power may be redoubled in each pulsation, the flood gates of the skin, the liver, kidneys and intestines are closed tightly, and amidst the raging heat of fever scarcely a drop of water may be exhaled until vaso-motor spasm is allayed and vascular relaxation is induced, when universal heat dissipation and secretory action are restored. For the relaxation of vaso-motor spasm and the promotion of rapid heat dissipation, with vascular dilitation in pyrexia, the action of aconite and veratrum is remarkable. Their power appears to be expended upon the entire ganglionic system, producing a partial paresis of that system of varying degree from the slightest sedative and soothing influence over the cardiac, coeliac and renal ganglia, allaying undue cardiac action and

inducing gentle relaxation of the arterioles and arteries, with moderate exhalation of moisture and reduction of fever up to a profound paralysis of the ganglia, enormous vascular dilitation rapid heat dissipation, copious perspiration, and that death-like coldness of the surface which follows its poisonous action.

Vaso-motor spasm from purely nervous influence, by causing sudden and extreme contraction of the capillaries and retention of heat, may also cause a very high grade of hyperpyrexia for a time.

Drs. Little, of Ireland, and Phillipson, of England, cite two well authenticated cases in which the temperature in two cases of hysteria went up to 125 degrees without danger to life on a number of occasions, lasting twenty-four or forty-eight hours. These remarkable examples of high temperature are never met within septicemic fever, but only in nervous affections in which there is spasm of the sympathetic nerves, as seen in hysterical affections, and are said never to be fatal.

These are good examples of vaso-motor action and influence in the retention and dissipation of heat.

On the contrary, in that form of hysteria attended with paralysis temporarily of the sympathetic, we see extreme vascular

dilitation and excessive heat radiation and loss, until the surface assumes a deathlike coldness. While all are satisfied that heat is produced during the process of oxidation in the formation of carbonic acid, water and urea in the system, the vast majority of the leading pathologists believe that in a state of health that beautiful, perfect and admirable equilibrium between the heat producing and heat dissipating powers, which gives us just sufficient warmth to afford strength and vigor and protect our bodies from the varying changes of the surrounding atmosphere, is alone under the control of the great sympathetic and vaso-motor nerves.

Is the rise of temperature in fever due to an actual increase in the production of heat in the human body or an increased retention?---This is a problem which has been discussed for ages without any satisfactory conclusion until recently. In the past few years, and very recently, Senator Liebermeister and Leyden, of Germany; Burdon Sanderson and Bonnyman, of Great Britain; Perinaut, of France; and H. C. Wood, of our own country, have devoted much time and care to the investigation of this question. After the most patient and accurate study and investigation, with carefully conducted experiments, they have, I believe, without exception, arrived at the conclusion that a healthy person on full diet produ-

ces a greater amount of heat in a given time than one with fever on such diet as fever patients are allowed.

In other words, an individual in vigorous health, subsisting on bread, roast beef, beefsteak, mutton, rich milk, potatoes, tomatoes and other vegetables and fruits, produces more heat daily than a patient in typhoid fever with a pulse of 120 degrees and a temperature at 107 degrees on fever diet.

This proposition explains itself when we reflect on the fact that the established principle of heat production in the organism depends more on the amount and presence of the hydro-carbons in the circulation than on any other agents.

The quantity of these materials taken into the system during fever is always diminished. If these statements are true it explains why it is that a rich and generous diet in fever is only adding fuel to the fire in the increased production of heat. The next question of interest which addresses itself to us is this: "Why, if the healthy system on full diet produces more heat than the fever patient, the temperature of the former remains invariably at about 98 degrees, while that of the invalid rises often to 107 degrees during fever. In the case of the healthy subject we apparatus for the regression of inordinate heat production and

heat dissipation is in perfect order, permitting the constant but equable escape of heat from the body as rapidly as formed, while in the case of the fever patient the same apparatus, the ganglionic and vaso-motor systems are in a state of complete derangement, not only failing to repress undue heat production, but by spasmodic action on the circulatory system, causing extreme vascular contraction, heat retention and diminution of radiation which constitutes what is denominated fever.

Rythm of temperature.---The subject of those diurnal changes in the temperature of fever termed remissions and exacerbations is one which has given rise to much inquiry and speculation. We may visit a patient in the morning and find his temperature nearly normal, while at our evening visit his temperature may be five or six degrees higher.

Whether this diurnal change is based on physiological law or due to morbid action alone is a question of interest. Burdon Sanderson, and Liebermeister, among others, after the most careful observation, find that there is a daily or morning and evening variation in the temperature of the healthy individual. This is true of every individual,. This they term the "rythm of temperature." They have ascertained, therefore, that the rythm

of temperature in disease is about proportionate to that in health, and reach the conclusion that the remissions and exacerbations of fever are acts simply in obedience to physiological law. When there fails to be a daily remission in fever it indicates that the physiological laws of heat dissipation are absolutely suspended and life is therefore endangered by hyperpyrexia.

Other authorities believe that the daily rythm of fever is due to the alternate contraction and dilitation of the entire capillary system, caused by the regular spasmodic action of the vasomotor nerves followed by relaxation; the first act causing retention of heat and suspension of secretion, while the second permits free perspiration and rapid heat dissipation.

The view has been put forth recently that the "inhibitory centers" of the vaso-motor system give rise to two distinct sets of nerves, one with the special function of producing capillary contraction, suppression of secretion and heat retention, the other having the power alone of causing capillary dilitation, heat radiation and loss. These two sets of nerves are supposed to act alternately in regular rythm, as is the case in the alternate contraction and dilation of the heart and arteries, and also of the arterioles in the acts of blushing and erection.

But vaso-motor spasm and contraction of the cutaneous capillaries soon induces retention of heat by suspending suddenly its dissipation from the surface. Then we have all the usual phenomena of febrile reaction. There is a ganglionic nervous center for every function of the human body, the sight, smell, taste, hearing, the action of the heart and blood vessels, digestion, intestines, renal, generative, respiratory acts, and lastly, ganglia regulating heat production and dissipation.

The rational treatment of fever.---Antipyretic remedies belong to these leading classes. The direct refrigerants as cold, the arterial and capillary sedatives, which produce their effect on fever by direct action on the sympathetic ganglia, allaying vaso-motor spasm, inducing arterial and capillary relaxation and dilitation, copious perspiration and rapid heat dissipation. This class is represented by aconite and veratrum.

But the most certain and permanent class of antipyretics are those which possess the most action, antiseptic, disinfectant, and antifirmintative powers. This class is represented by the preparations of cinchona, quinine being the principal, the sulphites, sulphurous acid, the salicylates, corbolates, nitrates, and chlorides. All of these classes are applicable to every variety

of fever. This would seem to confirm the views expressed in this paper, that in all fever there is more or less septic poisoning and that there is increased heat retention and suspension of heat dissipation by derangement of vaso-motor action.

1886

Fracture and ruptured Urethra.

S. H. S. Colored, act 28 yrs. a laborer. Was admitted in to Hospital on the afternoon of the 19th of May, with the following history. He was employed as a laborer on a Scow a boat generally used for dredging. At half past six on the 19th of said month he received the injury. He was sitting in the window of one of the compartments of the boat, as it was leaving the wharf he was struck by the projecting end of a piece of timber, knocked from his posture, thrown over the side of the boat and caught between the boat and side of the wharf. He was picked up out of the water and was removed to the Hospital at one oclock. He seemed to have suffered little from shock. Upon examination it was found that he had a fracture about the middle third of the right femur

A contused wound of his left leg or rather thigh. His hypogastric region was very much distended, percussion showing that there was retention of urine. Upon questioning him still further it was found that immediately after the reception of the injury he had passage of blood from the meatus, thus clearly showing that there was injury to one or other part of the urethral canal. The immediate flow of blood being generally considered as a pathognomonic sign of injury to this part. The distended condition of the bladder first requiring our aid, Mr Gill Jacks one of the house staff tried to introduce a catheter and thus relieve the distended viscus, but without avail, two successive attempts were made by Drs Warfield and Winslow but with the same result. It being late in the

day no other means to relieve the bladder were resorted to for the time being. The fractured leg was put up in a temporary apparatus. The patient was put to bed. At half past seven on the evening of the same day the patient complained of so much pain about the hypogastric region that it was thought best to resort to the aspirator, about two or three pints of urine was drawn. After this the patient seemed very much relieved. He rested well the first part of the night, suffering more or less inconvenience the latter part.

The next morning (20th) I went in the Ward to see him, he was lying quietly in bed, I asked him how he felt, he replied that he had pain about the umbilicus and upper part of left thigh. His chart was as follows; Temperature 99 4/5°, Pulse 92, Respiration 28. His bowels were

Confined having had no operation since the injury was received. On the night he was aspirated it was found that he could not raise the left leg from the bed, thus giving rise to suspicion of fracture. I examined the leg on the next morning and found that he could move it a little. I did not examine the limb for fracture as he was to be examined at eleven o'clock by one far more experienced than my self and moreover he seemed to be suffering very much and I did not care to inflict more. However when he was being anaesthetized it was clearly shown that there was no fracture, he using the limb vigorously in struggling under its effects. Having again on the morning following tried the sound but still with out success a perineal section was decided upon. not only to give vent to

the retained urine, but also to ascertain at what point the urethra was injured and if possible to repair it. At eleven o'clock of the same day the patient was removed to the amphitheatre and anaesthetized. Cock's operation or the perineal section was done (Bryant's Surgery Page 691). The operation was very tedious, but at last the bladder was reached and the seat of injury in the urethra recognized. An opening between the bladder and rectum was also found constituting what is known as a recto-vesical fistula. No direct cause to the urethral injury was traceable. The pelvis was thoroughly examined but no injury could be made out. In the majority of cases the injury is caused by some direct violence to the perinaeum, such as a fall on a post, fence, a blow or a kick or as in

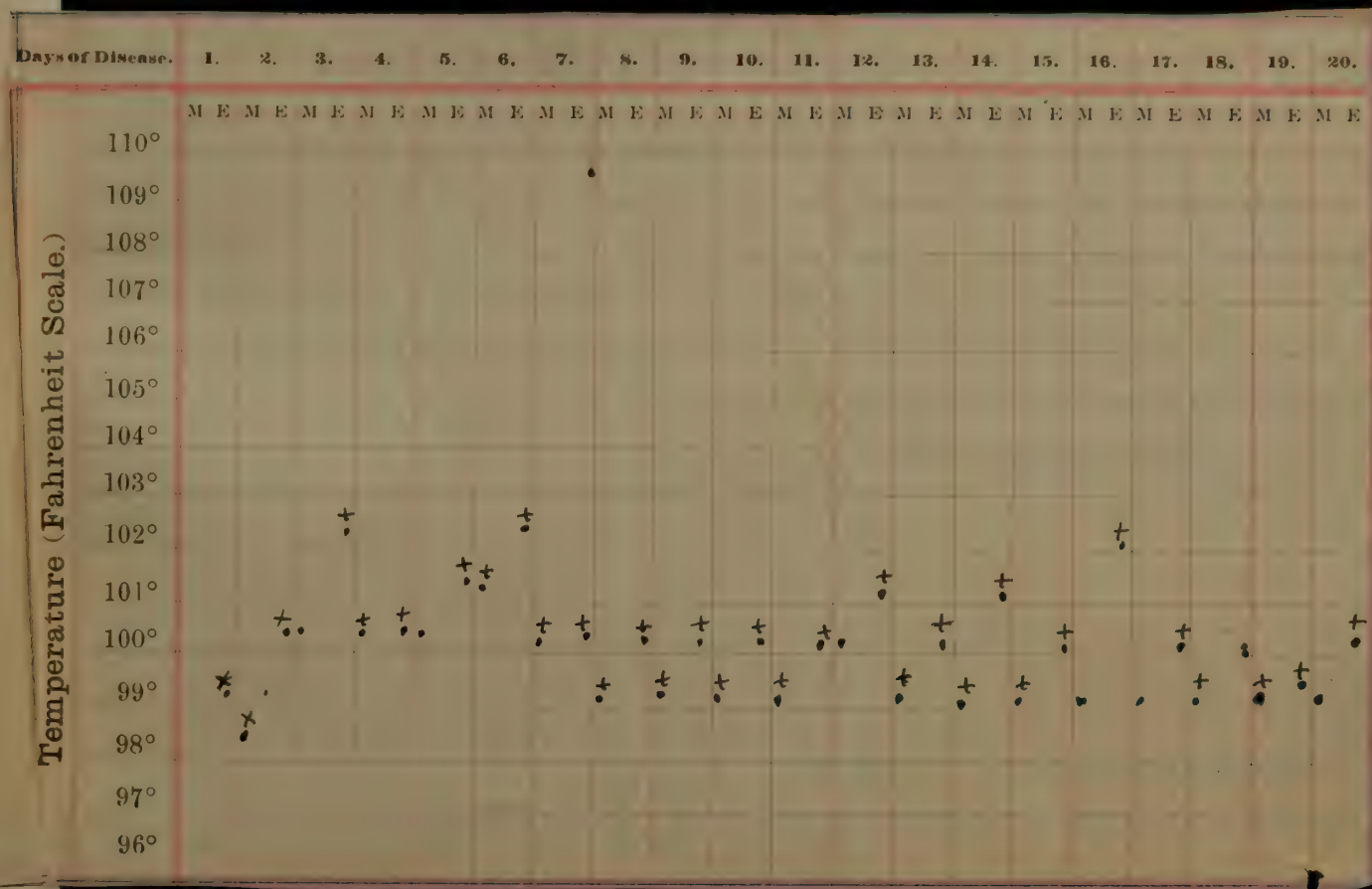
a case I saw from a fall from aloft astraddle a spar. If you will allow me I will use the words of a great Surgeon, which are as follows. In not a few instances the injury has been caused by the passage of a cart wheel over the pubis. although it may be somewhat difficult to understand how such an injury can be produced by this cause unless some fracture of the pubic portion coexists, but explain it how we may, in practice we meet with cases of ruptured urethra following the passage of a cart wheel over the pubis and unconnected with any other distinct evidence of fracture. While the passage of a cart wheel was not the cause in this case, yet in falling he might have been caught between the two opposing bodies in such away thus causing the violence to act

in the same manner that a cart wheel would have done. After the operation he was taken back to the ward, his fractured limb put up in the proper apparatus with extension. His chart on the evening of the operation was as follows, Temperature 99 4/5, Pulse 124, Respiration 28. The next morning (21st) I saw him, he was lying quietly in bed, complained of some pain about the umbilicus, but seemed to be doing very well. Slept some during the night. Had a Temperature of 98 2/5, Pulse 94, Respiration 20. Passed water through the hole in perinaeum.
21st evening. Temperature 100 4/5, Pulse 100, Respiration 20. Feels a great deal better, seems to be doing well. Suffers little or no pain. Water coming through the perinaeum.
22nd, Morning. Temperature 100. Pulse 100, Resp

iration 28. Fuls very sore about the perinaeum. Pain in hips, fuls badly. Slept very well during the night, Passed water this morning.
Evening. Temperature 100 3/5, Pulse 104, Respiration 28. Has slept some, Passed water. Has little or no pain. Left thigh fuls much better.
23rd Morning. Temperature 100 1/5, Pulse 96, Respiration 26. Fuls sore about the perinaeum Passed water. Has eaten a little. Seems to be getting along very nicely indeed. Slept well last night and fuls much better.
Evening. Temperature 100 4/5, Pulse 92, Respiration 28, Does not fel sound, but appears to be quiet. Appetite very good. The tube has been removed from the hole in perinaeum. He continued to improve. A sound being introduced as often as was necessary, until the wound

Respirations per minute.
10
15
20
25
30
35
40
45
50
55
60

Pulse-beats per minute.


Days of Disease.
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20.
M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E
Temperature (Fahrenheit Scale.)
110°
109°
108°
107°
106°
105°
104°
103°
102°
101°
100°
99°
98°
97°
96°

in the perinaeum healed and the rectal canal was fully restablished. In two months the patient was walking about with the aid of crutches. The passage of the sound was continued for some time afterwards. On the 28th of July, while walking across the ward he fell and refractured his leg. Happily so far him because this time a much straighter and better limb was obtained, both to his good and to the satisfaction of the Surgeon. The plus mark in the chart indicates a little more than what is really represented.

Scirrhus — Cancer

These tumors are characterized by the large amount of stroma or frame work which they contain, by chronicity of growth, firmness and hardness as the term indicates. They are not encapsulated but on the contrary infiltrate the surrounding tissues, thus on manual examination the surrounding tissues move with the tumor. It creaks under the knife when cut. The cut surface from its dense glance has been compared to an unripe pear. The growth is usually depressed in the center, owing to the contraction of its dense structure. Its most common seat is in the female breast. Great care should always be exercised in the diagnosis and differential diagnosis of these tumors. They are diagnosed by their extreme hardness, chr-

oniecity of growth and by the surrounding tissues being infiltrated. Pain is by no means a constant symptom of Scirrhus Cancer.

If noticed in its incipiency it will appear hard, small, nodulated and adherent. As a general rule they progress slowly. Found most often in the female breast about middle life. They are hardly ever noticed in their incipiency, the patient generally finding it out accidently. They continue to grow and may involve the whole breast. They are to be differentiated by their seat, sex and age of patient, by extreme hardness, pain not constant, by being infiltrated and retraction of the nipple as a rule. The neighboring glands are usually involved. The skin over the tumor does not look like that on the opposite breast, but

appears dimpled and gives to the breast a sort of brawny appearance. The prognosis as a rule is unfavorable. If allowed to go on it may result in ulceration. When the neighboring glands are involved of course this makes the prognosis still more unfavorable.

Treatment: The only treatment which offers any permanent benefit is free excision together with the whole mammary gland. The trouble often tends to recur, consequently the necessity of free excision. But even if immunity for six months or three, four or six years can be expected it is better to excise. The following is a brief history of three cases of Scirrhus Cancer.

(1st) L. A. Aet forty. Married. number of children six. Four of them living, two dead.

Last confinement about eight months ago. Nursed all of her children. Never had any mammary trouble until now. Parents still living. No known hereditary tendency or cause. No history of traumatism. The husband thinks the child struck the breast with a piece of wood. The right mammae began to enlarge about six months ago. There is present now a growth and two cysts. The glands are not involved. The growth was rapid. Experienced no pain at all. A free excision was made after tapping the cysts, which contained a brownish thick fluid. The axilla was not disturbed. After the operation the wound was dressed with todoform, oakum and cotton. Microscopical examination revealed the neoplasm to be a carcinoma.

(2nd II). D. L. act fifty. Has had four children. Two are living, one died from pyaemia, the other from cholera infantum. Last confinement about fifteen years ago. Nursed all of her children. Had a cold in her left breast. Menstrual period regular, last show about two weeks ago. Parents died of Phthisis. Flattening of the breast was first noticed three years ago. Later on a lump was noticed beside the nipple. The axillary glands were involved. The growth was hard and not circumscribed. Left breast was not affected. Usual operation was performed. The axillary glands were freely removed. The ordinary dressing was applied. The microscope revealed the trouble to be a Scirrhus Cancer.

(3rd/11) M. S. aet sixty. Has had six children, all dead. Last confinement seventeen years ago. The menstrual periods were always profuse. Last show twenty years ago. No history of any mammary trouble in family. No injury could be assigned. First noticed the lump about one year ago. Axillary glands were enlarged. Left breast one affected. Free and complete excision was made. Axillary glands were removed. Ordinary dressing was used. The wound was redressed on the fourth, eighth and eleventh days. All three of these were removed.

Insolation.

The terms insolation and sunstroke says Prof Flint are applied to an affection, or, perhaps more properly, to different affections, occasioned, not exclusively by direct exposure to the rays of the sun, as the terms signify, but by the action of great heat combined usually with other causative influences. The malady manifests itself by a sudden attack which occurs in extremely hot weather, after exposure to the direct rays of the sun or to great heat with additional causative influences. It is characterized by loss of consciousness, followed by stertor and frequently by convulsions, the case rapidly terminating fatally in most instances. The attack may last from a few minutes to sev-

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eral hours. The prognosis is always extremely grave. In a certain proportion of cases the patient seems to be ~~th~~ thoroughly prostrated and exhausted, his vital powers seem to be taxed to their utmost. The circulatory system suffers greatly, finally gives way and the patient dies from syncope. In another class of cases the trouble seems to be purely cerebral, closely resembling congestion apoplexy. In still another class of cases the symptoms show a combination of both apoplexy and marked exhaustion. The type just described constitutes the great majority of cases of insolation. Some cases seem to suffer mostly from the extremely high temperature of the blood. The premonitions are slight and very of

tion wanting. The temperature often reaches the maximum of 108°, 110° to 112° Fah—. The muscular system suffers greatly in some cases.

Symptoms. The attack may last a very short time, consisting merely of a transient insensibility. In severe cases the patient rapidly passes into a comatose state. The patient is generally in this comatose condition when the physician is called. Patients are suddenly siezed while at work with a sense of fullness and pain in the head, occasionally nausea and vomiting. The condition of the pupils vary, at times dilated, at others contracted, or they may remain of a uniform size. The pulse is also subject to great variation, at times full and strong, at others feeble and accelerated. When near a fatal ter-

mination it often assumes this latter form. I have observed death to take place purely by apnoea, the heart continuing to pulsate after cessation of respiration. The respiration also varies, in some instances stertorous, in others audible or suspirious and accompanied by moaning. Dr Hartshorne discribes two forms of insolation and symptoms characteristic of each. In one the direct rays of the sun upon the head induce cerebral congestion, in the other excessive heat, often natural under the immediate influence of the sun, affects the whole system with prostration. The symptoms in genuine sun stroke or the first variety are as follows, falling, unconsciousness, the head is very hot, the temporal arteries destended, the breathing is apt to be

stertorous or snoring, the pulse full, generally rapid, but in certain cases slow. In most cases convulsions are common. The second variety, more common than the first. The attack in this variety comes on almost as suddenly as in first variety. There is no excessive heat in the head as in former variety. The pulse is rapid and weak. Unconsciousness is less complete and without stertorous breathing. The whole condition in this variety or form resembles syncope. In almost all cases of insolation the temperature of the body is excessively high. Convulsions and rigidity of the muscles are of frequent occurrence. Nausea and vomiting, toward to the close of life involuntary evacuations from the bowels are generally present. The real

so noticed involuntary evacuations from the bladder. The appearance of vomiting and purging renders the prognosis extremely unfavorable. As my experience is so limited and not having seen any post-mortems in cases of insolation I will not mention the pathological changes found after death. Excessive heat is the chief cause of insolation, but other combined agencies also have a marked causative influence, such as sun and unduly prolonged muscular exercise in very hot weather. Persons are generally attacked while at labor; but there are exceptions to this rule, Dr Swift states cases of insolation occurring shortly after dinner. Persons are generally attacked in very warm weather and when exposed to the direct rays of the sun,

but this is not invariable, Dr Swift states several cases occuring in the same laundry on the same morning. Cases of insolation are more frequently met with in the tropics than in temperate or colder climates. In temperate climates cases occur in the oppressively hot periods of Summer. The diagnosis is generally made without difficulty. Great fulness of the pulse, relaxation of the sphincters, tracheal rales and excessive cerebral temperature are always bad prognostic signs. Convultions are very unfavorable omens. Patients sometimes die rapidly of asthenia or syncope, at others of apnoea, but generally by apnoea and asthenia combined. Most cases of Sunstroke occur in large cities and among the laboring class

Treatment. No definite rules as to treatment can be laid down. Some cases requiring exactly the opposite treatment as others would. Thus cases in which the cerebral symptoms were marked would require a different plan of treatment from those suffering from extreme exhaustion. When the cerebral symptoms are very severe you should bleed at once. Leeches or cups may be applied to the back of the neck or behind the ear. Cold cloths kept on ice or in ice water should be changed and frequently applied to the head and chest. The surface of the body may be sponged with ice cold water, or rubbed with small lumps of ice. It is better that the head and shoulders be kept raised, thus tending to decrease the supply of blood.

recommends rubbing the body with Spirit and water. In cold marked apoplectic cases bloodletting should be resorted to immediately and the use of purgatives (Croton oil) if necessary. The clothing should be loose or better removed. I think the best plan is to remove all the clothing, have the bed protected by a rubber cloth, in this way water can be readily applied and the evacuations speedily removed. If the convulsions are very severe the inhalation of Chloroform may be resorted to. The Carbonate of Ammonia may be resorted to as a cardiac stimulant. The patient should be kept in as cool and pure an atmosphere as possible. I shall now give a brief history of a case of insolation which came under my observation and per-

sonal ear on the night of the 23rd of July 1885.
J. S. of German nativity, act about 30yrs.
Occupation that of a laborer, was paving
the streets at time of attack. He was pic-
ked up on the street in an unconscious con-
dition at half past seven in the evening, at
nine he was removed to the Hospital still in
the same condition. What treatment he
had received during the two hours I do not
know, but from the excessive vomiting and
from the odor of the vomited matter he had
been freely stimulated. His clothes were remo-
ved, all except a small shirt, and the pa-
tient put to bed, the bed being previously pro-
tected with a rubber sheet. His temperature
was very high, perhaps reaching as high as
110. It was evidently a case of insolation.

His trouble sumed to be chiefly cerebral. His head was excessively hot, he lay in a comatose state. His pulse was at times full and quiet, at others quick and feeble, it assumed this form just before he died. His breathing also varied, at one time stertorous, at another audible or suspirious and accompanied with moaning. His head was so hot that the cold cloths had to be rapplied every two minutes. Nausea and vomiting was excessive. Frequent and involuntary evacuations from the bowels and bladder were present to a marked degree. He sumed to have little or no controll of his limbs. Just before death there was irregular spasmodic actions of the muscles of the thighs and legs. His pupils were somewhat dilated. Just be-

for death his body assumed a position much resembling opisthotonos. at two oclock he died of apnoea, his heart continuing to puls ate after respiration had ceased entirely.
Treatment: He was bled as soon as he arrived. Hypodermics of whiskey were administered. Cold applications by means of cloths were applied to the head and chest. The surface of the body was thoroughly sponged with cold water and rubbed with pieces of ice. Cold applications to the head were reapplied every two minutes. His temperature was reduced somewhat but nothing seemed to do much good. He continued to grow worse. His pulse became very much weaker, his breathing sterterous and labored. at last his respiration ceased by death from Apnoea.

Gangrene.

The absolute and permanant arrest of the performance of function in a part constitutes the affection known as gangrene, necrosis or local death. The term gangrene is generally referable to the soft parts, necrosis to the osseous system. Whatever interferes with the nutrition supply of a part and when the already existing nutrition substances have been consumed, interferes with the return of the so to speak effete matter from the part may cause its death.

Varieties. Mortification or gangrene may be divided in to three general groups, although there are subdivisions. The divisions are as follows, Traumatic, Anaemic or Arterial, Static or Venous. We also have two other varieties, viz. Hospital and Senile.

Causes. It is said to be traumatic when brought about by external violence, such as burn injury, the action of corrosive acids or chemicals. When the vitality of the part is immediately destroyed it is said to be direct gangrene, when the part dies as the result of an injury it is said to be indirect. It is said to be anaemic or arterial when the non supply of nutrition is due to arterial obstruction. Static or venous when the venous circulation is interfered with, thus favoring the non return of the blood to the heart. The blood being animal fluid you can very readily see how in a two fold manner it may cause death of the part. It may give rise to death of the part from mere want of nutrition, the nutritive particles having been used up-

and the part so engorged with used up blood that the reception of new arterial blood is prevented. This may be more or less aided by the blood undergoing decomposition from being retained too long in the tissue of the part. When death takes place in a part filled with blood as in venous obstruction moist gangrene is said to exist, when due to want of arterial supply dry gangrene is said to exist.

Hospital Gangrene. This form is met with in over crowded and badly arranged wards. where a great many wounds are congregated and especially when they have not been kept clean and a free exit for drainage has not been provided. The treatment is not to let it occur. It is probably due to the entrance of an organism.

Arterial obstruction may be caused by compression of a ligature, or of a tumor, by a ruptured thrombus or embolism. The arterial coat itself may be diseased. Arterial obstruction necessarily interferes with the nutrition of the part which the affected vessels supply. If the obstruction be complete and if the arterial supply is so poor as not to allow the establishment of collateral circulation, the part quickly dies from starvation. Death of a part may also result from capillary obstruction. This may be due to pressure directly upon the part or to stretching of the vessels caused by inflammatory products. The inflammatory accumulations squeezing them on every side, thus cutting off all nutritive supply. Shutting off all communication with the circulatory system and blood supply.

Hemorrhage may also be a cause of gangrene. It acting very much in the same way as inflammatory accumulations do. So constricting the capillaries on every side by its great accumulation and later perhaps by a clot thus cutting off all nutrition supply. Excessive and continuous pressure exercised by new growths or as we often see in bed sores, not those due to trophic trouble, may be a cause of local death of a part. Obstruction to the capillary circulation only causes death of the immediately adjacent tissues. As examples we have Necrosis of a superficial layer of bone in periostitis, due to compression of the capillaries between the thickened periosteum and the hard bone beneath. When inflammation itself is the cause of gangrene, it is

due to stasis. In other words the circulation in the part is stopped, the store house is exhausted. all supply of food is cut off and the part dies of malnutrition. Venous obstruction of itself is rarely a cause of this malady of which we are speaking. Because the anastimosing branches are so numerous, thus readily establishing collateral circulation. Then for gangrene a most complete venous obstruction would be necessary. When ever it does hold an important position as a cause of gangrene, it's then generally associated with cardiac weakness or arterial disturbance in one form or other. Thus you see both the muscular contractions of the heart and of the arteries being so weak and diminished, thus not enabling the circulation through the veins to be carried on properly. Cardiac weak-

ness of it self is never a cause, although associated with other causes it may be an important agent. A part may be completely disorganized and loose its vitality, its cellular elements being destroyed by such influences and agents as excessive heat, cold, chemicals, corrosives or caustics. Senile Gangrene. This form or variety of gangrene occurs most often in the old. It is seen in old people whose circulation is bad and their vital powers below par. It affects generally the lower limbs. The most common cause is an atheromatous or calcarious condition of the arteries. While this condition is the exciting cause, it may be latent and may require some exciting cause to develop it, such as cold and heat. This atheromatous condition of the arteries lessen the lumen and

elasticity of the vessel and thus materially affects the circulation in it. This is manifested by coldness of feet and more or less venous stasis. This abnormal condition of the vessel wall may give rise to a thrombus. This variety is evidently a form of dry gangrene, but they differ in many respects. Senile gangrene occurs in the old and especially in the lower extremities and the vessels are almost always atheromatous. Dry gangrene may be seen in either the old or young. The cause is not due to atheroma but to arterial obstruction. In both the affected part is more or less dry. The following is a brief history of a case of Senile Gangrene.

F. W. German nativity, aet fifty. His occupation was that of a night watchman and consequently was much exposed to the inclem-

tudes of the weather and extreme cold.
On the night of the 17th of February last while on duty he had his right foot frost bitten. It gave him little or no trouble until about two weeks afterwards. He noticed that it was turning a little black. This continued to go on from bad to worse. He was admitted in Hospital on the 24th of May following. The gangrene continued to progress and spread. It was clearly a case of dry gangrene. At first it could not be decided upon, whether it was a true senile gangrene, the man having atheromatus arteries, with cold as the exciting cause, or dry gangrene due to arterial obstruction. The mans age contraindicated senile gangrene. But afterwards it was decided that it was senile gangrene

with the rheumatic arteries as a predisposing or latent cause, with cold as an exciting cause. At the time he entered Hospital his foot was very black. As it is the rule in these cases not to interfere but let nature who is the better surgeon do the amputation by forming a line of demarcation or ulceration. The foot was dressed with oil, iodoform and acetum and then a bandage applied. The man was put on tonic treatment and every effort made to assist nature in her efforts. This treatment was continued for some time to see if a line of demarcation could form. Having dispaired all hope of such results and moreover as the trouble was spreading up the limb, it was thought best to amputate as the last resort. On the first of June

The limb was amputated in the middle of the knee. The wound was dressed and the man taken back to his bed. That evening I visited him. He was sitting up in bed, said he felt very well. Temperature 101; Pulse 112, Respiration 24. I visited him night and morning, always said he felt little or no pain, but in the contrary felt very well. On an average his chart was as follows. Temperature 99°. Pulse 100. Respiration 20. On the eighth day after the operation the dressing was removed for the first time. The wound showed every sign of recovery of the disease. As soon as the bandage was removed the characteristic smell was very apparent. His appetite continued to be good and always said he felt very well. His leg was

dressed daily. On the 19th of June both flaps had sloughed and the condyles of the femur were very black. A reamputation was done in the lower third of the femur. This time there seemed to be less tendency of reoccurrence of the trouble. About a month afterwards the man died of Tuberculosis.

George C. Meredith

1886.

Inflammation of the Pelvic Tissues

One of the most unfortunate results which ~~which~~ can embarrass the Gynecologist and Obstetrician is the development of pelvic inflamations, following upon examination or surgical operations upon the pelvic organs, or as a result of abortion or child birth. Fortunately this affection does not often exist, but the readiness with which it may develop renders surgical operations upon the pelvic organs at all times hazardous, and calls for extreme caution and attention upon the part of the operator or accoucher. Under certain conditions very trivial operations have occasioned its development. To the simple introduction of the uterine probe, wearing of the common forms of pessaries, slight imprudences during menstruation, and sexual intercourse

...ed ... bleeding without
...ing pain, — ... of the disease
may be made out by physical examination
... bimanual palpation or by the intro-
duction of the finger in the vagina or
rectum, The vagina will be found
to be hot and swollen and in some
instances oedematous; on reaching the
cul de sac induration may be made
out in the form of thickened or indu-
rated masses or a tumor of consider-
able size apparently attached to the
sides of the uterus and vagina ...
above the pelvic brim, ...
the movements of the uterus will be ...
...ed but ... around
..., — Parametric inflammation
terminates either by resolution or suppuration
and the symptoms will vary with the

distinguished from the abdominal organs, these two affections may often turn from the one [illegible] the other and defy a distinction in diagnosis. In as much as these two affections call for the same general indications for treatment an exact diagnosis not absolutely required—

The treatment of perimetric inflammation calls for a prompt recognition of the disease and an early application of the remedial agents required. In as much as this affection is so frequently traceable to a traumatic origin and a not uncommon result of surgical operations upon the pelvic organs the operating surgeon should never lose sight of its sudden development and should go prepared at all times, for the earliest indications of its approach

No doubt in many instances the timely

emoval of uterine dressings and pes-
aries or a discontinuance of the employ-
ment of instruments in vaginal and
uterine examinations have warded off
attacks of pelvic inflammation. Whilst
neglect in removing these exciting causes
often premonitions of the disease have
been given and brought on dangerous
and even fatal results. - As a rule every
surgical operation upon the uterus
however slight or trivial it may be
in character should be visited with
close and scrutinizing attention
Perhaps no other organ of the body will
allow at times such indiscriminate
and rough handling as does the uterus
which other times repels the most
careful manipulations with angries
threatenings. - We have noticed as

causation of the disease some of the mil-
dest and most gentle operations in
uterine surgery. For example the mere
introduction of a uterine probe
The readiness then with which pelvic
inflammations develop should at all
times call for gentleness, care and
attention after operations upon the
uterus have been performed
The removal and reapplication of uterine
dressings. The employment of antiseptic
washes and lubricants all require gen-
tleness and caution.
The exposure of the person of the patient
and rough use of the speculum in exami-
nations upon the table independent of
the physical effect is morally depressing
and distressing to the patient could not
really to be condemned. Such examinations

should be at all times be approached
with delicacy and gentleness
After labor or abortion the same careful
attention above referred to should be
observed. - It is a not uncommon prac-
tice with many physicians to trust
the results of parturition to untrained
nurses, to disregard an examination
of the placenta and even the vagina
and uterus after child birth, the perineum
has even escaped observation when
ruptured, the attending physician
being ignorant of its condition until
days and months after the occurrence
How often do we find patients
suffering from a ruptured cervix
prolapsus of the uterus dependent
upon a ruptured perineum, who
are not cognisant of their infirmity

until the date of application for
treatment. It is too true that these
conditions are almost daily recognized.
This ought not to be so and just here
a radical change in the management
of the lying in State is urgently needed.
The surgical accidents of child birth
demand immediate recognition, and
treatment at the time of their occurrence
and this habit of neglecting to ascertain
such conditions should be regarded
by the profession as criminal practice.
Needless were the cause or causes of
Peritonitis in flammation, Abdominal
Peritonitis, and septicemia rigidly
ingrained into them would in many
cases be referred directly to the un-
recognized accidents of child birth,
to a ruptured perineum or cervix

lent. Unused and lacerated, possibly the retention of placental masses allowed to decompose and putrefy within the body of the uterus and thereby not as yet for hemorrhage or purulent absorption. It is not uncommon to find that the ordinary lochial and other secretion remain without examination or ordinary cleanly attention,

The day is doubtless near at hand when all of these conditions will be forced upon the attention of the attending physician, when oversight and neglect of such accidents will be considered Mal practice and the guilty should be held responsible for incapacity and ignorance.

In the treatment of peritonitic inflammation the first duty is to ascertain the probable cause or cause which

induced the attack and seek at once
to remove them. Should the disease
when first observed have advanced
to an active and acute stage and
before the effusion has occured or
has become organized leeches should
be applied over the hypogastrium and
several ounces of blood locally abstracted.
After the removal of the leeches warm
poultices made of ground flax seed meal
of sufficient thickness to retain heat
without producing too great pressure
upon the abdomen should be applied
directly over the entire hypogastrium
and allowed to remain three or four hours
before removing the poultice a fresh
one should be made and ready to
be applied the moment the old one
is removed, in order to prevent a

illing of the surface. A convenient
method of making poultices is to apply
veral layers of flannel between the
kin and a poultice and over the top
layer of flannel covered with oiled
ilk or oil silk paper. The entire poul-
tice is firmly bound over the lower
elly by means of a wide bandage
assing around the entire person
he object of the flannel and oil silk
ferred to, is to secure the regular equality
f temperature as long as can be and
thus prevent frequent applications
f poultices. The use of poultices
may prove more harmful than
beneficial if the rules for their applica
ion are not carefully observed
bsolute rest in the recumbent posture
s imperatively necessary and the

patient should be warned of the danger attending imprudences in this respect every thing which can tend to relieve the fatigue of one position in bed should be employed. The use of pillows or the aid of attendants in lifting the patient in altered positions materially increase comfort and patience

~~[illegible]~~

The presence of fever calls for the administration of refrigerants and sedatives— Quinine and Opium in small and repeated doses are highly recommended— This combination may be continued during the pyrexia of the disease

small doses of calomel placed on the tongue
will frequently control obstinate vomiting
when other medicines have failed
Diet in these cases is a question of vast
importance, all solid food should be
abandoned and the patient should be
placed upon free use of food milk
beef tea & light nutritive
The extracts of beef are often acceptable
and highly nutritious. The repugnance
to food need to be overcome when it
exists and the patient urged to persev-
ere in taking her diet
This is often a question of nutrition
and support in asthenic subjects.
Nursing and attention when diligently
employed are important elements
to success in the management of cases
of peri uterine inflammation

Calomel 2 grains with 1/2 gr of Opium
every four hours during twenty four hours
has been recommended. When the temperature
rises as high as 103° or 104° the Hypodermic in-
jection of the Hydrobromate of quinia may
be administered in 20 no doses with good
results. In cases troubled with obstinate
vomiting where medicines and food alike
are rejected from the stomach the
hypodermic use of Tannin & morphia
should be resorted to each remedy being
administered repeatedly and in proper
dose. Vomiting is often persistent in
these cases and calls for appropriate
treatment. Lime water and ice. Creasote
Hydrocyanic acid. Sub. nitrate of Bis-
muth acid soda water and chloroform
have all been recommended
for this symptom

The patient requires unremitting care and life and death, as in Typhoid fever may suspend between the vital power of patient upon the one hand and the support and aid of intelligent watching upon the other. Hygienic conditions require attention, fresh air without draught, clean linen, good diet and cheerful surroundings all claim the attention of the physician and add largely to the good results which follow such intelligent treatment

Cataldus H. Posey

Thesis on

Diphtheria

by

Richard D. Evans L. R. C. S.

South Wales

Great Britain

Session 1885 & 6

Diphtheria

To dean and Faculty of the
University of Maryland

Gentlemen,

As it is one of the requirements of our Alma Mater, that each one of the candidates for graduation is compelled to write an essay or Thesis on any subject in any of the branches in Medicine I will make an effort to comply by taking the above subject as my theme I will not attempt to write an exhaustive Article in the chaste diction of a proffessor but in my own chosen vocabulary give you the Views of the different Authors and observers on the subject, Trusting that any inaccuracies in this essay will be overlooked as the only excuse

I can offer for sum is my own inexperience therefore I ask your kind indulgence -

Diphtheria is derived from the Latin signyfying a skin or membrane

Of all the general diseases to be considered one of the most important is the affection known by this name and is a disease of great antiquity dating back as far as the commencement of the Christian era

Aretaeus at the close of the first century after Christ described it as malum Aegypticum

This disease is pre-eminently a disease of childhood a large majority of cases occuring between the ages of Two & Ten years under the age of one year the

average the child the less liability to it and it rarely occurs prior to the fourth month.

This affection prevailed at times as an epidemic in the various parts of the world from a very remote period it has occured but rarely in this country within the last Seventyfive years In 1789 it was described by Bard as Angina Suffocativa. The distinctive characters of the affection were very clearly elucidated by Bretonneau in 1821 - 25 & 26 who applied the name of Diphtherite whence Originated the name Diphtheria this name the significance of which refers to the characteristic of the local event viz. the formation of the false Membrane. To say the least the negative merit

of not involving any hypothesis concerning the pathology of the disease

It is well known that much has been written on the question whether these two diseases Croup and Diphtheria are identical or not, In diphtheria we have a disease which is undoubtably infectious its communicability from person to person being associated with the fact that it depends upon the existence of a micrococci in the mucous membrane These organisms are not only found in the mucous membrane, but having penetrated into the blood they have been observed in the bloodvessels and tubules of the kidneys, and are comparatively of a large size and appears to be allied in form to that which is found in the

decomposing animal juices
St. occurs in the form of multitudes
of minute globular Bacteria aggregated
into colonies and capable of self propagation
in the tissues. Now this Organism, either
in itself or by its products, is an irritant
to the mucous membranes, and produces
violent inflammation, The inflammation
differs in the Fauces & Nares on one hand
and the Larynx and Trachea on the other
In both a catarrh is the first sign of
inflammation the mucous membrane
is hyperaemic and there is an increase
of Mucous secretion, In the case of the
fauces and nares this is succeeded
by the formation of a false membrane
which does not invade the mucous
but involves the superficial layers

of mucous membrane as well, the intact in fact, has caused a partial necrosis of the mucous membrane which by [illegible] by sloughs and leaves an ulcer.
The necrosis here may be regarded as an instance of coagulation necrosis the dead tissue undergoing the change already described and being converted into a fibrinous clot; it is possible that along with the coagulated tissue there is actually fibrin produced in the usual way in the meshes of the tissue. the false membrane is therefore composed of fibrin and necrosed and coagulated mucous membrane.
When the slough seperates there is apt to be a second formation of false membrane the same thing occurs if

[illegible] with the process in the fauces and nares and that in the Larynx and Trachea is somewhat different the disease usually begins in the former structure its most frequent primary seat being in the fauces, where it occasionally extends into the nares, and more frequent into the pharynx and Larynx. In the Larynx after the catarrhal stage there is also a product of false membrane, but this does not adhere to the mucous membrane nor is there usually any necrosis. The false membrane is a whitish layer which is loosely connected with the mucous membrane and is readily raised by the mucous under it, There are undoubted inflamatory changes in

the mucous membrane in the form of infiltration with [illegible] [illegible] the only actual loss of substance in the sheading of the epithelium of the surface the epithelium always undergo necrosis before the formation of false membrane

Differences of opinion exist as to the nature of this pseudo-membrane in larynx and trachea

Croup is a name given to a membranous sore throats in which the exudation is mainly and entirely in Larynx & Trachea the name was applied before the eminently contagious diphtheria was distinguished and it was commonly only understood to be a peculiar violent inflamation of the air passages there seems to be no doubt that non-

-ways - at least. The great majority of cases of croup are really cases of Diphtheria in which the disease is mainly or entirely in the Larynx Trachea. Diphtheria resembles Scarlet fever in certain peculiarities in its incubative period (2 to 8 days) in its variability of type from a very mild to a malignant form in the common form or seat of its inflamations viz in the fauces and nasal Passages in the pro-found blood poisoning and prostra-tion in the graver cases and in the frequent occurrence of nephritis as a complication or sequela. It resembles both Scarlet fever and Small Pox in the fact that it is communicable both through the atmosphere and by contact

or inoculation. It resembles erysipelas in the variableness of its duration and in fact that one attack does not protect the system from another in its etiology it resembles Typhoid fever, for it is not only communicable from person to person but it is produced by foul exhalations as Sewer gases but while there are certain resemblances it is distinguished from all these diseases by marked peculiarities Diphtheria is primary or secondary the secondary form most frequently occurs during epidemics of the other infectious diseases and as a complication of them these infectious diseases or malaises which are accompanied by inflammation of the fauces and air passages, are most liable to this complication, if they occur

in a locality where diphtheria prevails; the inflamation of mucous surfaces accompanying them being transformed into the diphtheritic, a catarrhal inflamation however produced is liable under the influence of the virus to become diphtheritic and pseudo-membranous

The general fact in regard to Diphtheria and its mode of manifestation namely that in one affected by Diphtheria the diphtheritic inflamations appear by preference upon such surfaces as are already inflamed, the microscope in the hands of various observers have revealed important facts relative to diphtheria

The Bacteria Theory

In every tissue which is the seat

of diphtheritic inflammation and in every pseudo-membrane the spherical bacteria occur in immense numbers accompanied by a smaller number of the other kinds, In severe cases, in which the system is affected, they occur also in the blood, Ordinarily, as the symptoms of diphtheria become more grave a proportionate increase in the spherical bacteria can be demonstrated by the microscope, In the very commencement of Diphtheria the grayish white spots which appears upon the inflamed surface consist entirely of these bacteria, with epithelial cells and mucous white fibrin and pus appear at a later period, as a result of inflamatory reaction

These facts have been ascertained by various experiments made by prominent Microscopist and Pathologists - in order to determine more fully the exact relation of the Sphero-Bacteria and Micro Bacteria to diphtheria, These organisms are not found in the Croupous membrane produced by the application of a powerful Chemical Agent as Ammonia nor upon the inflamed surface underneath the membrane although the fibrous exudation afforded a soil which varied little or not at all in its histological and chemical Composition from that induced by diphtheria Oertel inoculated the mucous membrane of the air passages, the cornea and muscle in animals with

diphtheritic matter, and found that the Sphero-Bacteria and the micro-Bacteria penetrated its layers, forcing them apart, and causing within a few days keratitis and death of the animal by infection of its blood. In the same Oertel says bacteria spread over the mucous membrane of the Trachea - beset the cellular elements, crow'd especially into the young exudation cells or are taken up by them, and gradually cause thier dissolution, they fill the blood and the Lymph, vessels and bring about, in a mechanical way, a damming up of the fluids, and as a consequence, serous exudation, as they close up the capillary vessels, they occasion stagnation in

the blood circulation, which causes
disturbance of nutrition in the walls
of the capillaries and even rupture
of the same, Muscular fibre, also,
which are covered and filled with col-
-onies of micrococci, degenerate
slough, in like manner in severe
cases, immense number of bacteria
appear heaped up in the uriniferous
tubules and malphigian corpuscles
of the kidneys and occasionly there
is parenchymatous inflamation,
capillary embolism of the glomeruli
of the kidneys with ruptured vessels
and formation of epithelial casts
in the Tubes,
In the lymph and blood stream
in long continued sickness of the

animal experimented on, the bacteria also accumulate in masses. They induce, as excitors of decomposition and disorganization of organic nitrogenous bodies, septicaemia through the vegetative process they undergo, and through their relation to Oxygen, The importance of such experiments cannot be too highly estimated, in the opinion of those who have performed them. The conclusion is inevitable that diphtheria is produced by bacteria, which coming in contact with the mucous membrane or cuticle deprived of the epidermic covering, adhere to it and these multiply rapidly burrow through the tissues and

entering the vessels affect the whole system. The reason assigned why diphtheritic inflammation, in most cases appears primarily, and chiefly upon the faucial & nasal surfaces is that the air, which contains the germs of Diphtheria or Bacteria, constantly passes over these surfaces, and as regards the fauces the ingesta also which may contain them. The important practical inference from this theory is, that diphtheria is entirely local and is amenable to local measures. Clinical observations may modify or correct these theories derived from the results of these experiments. There are two distinct propositions

evidently, include in the bacterial theory, first that bacteria causes diphtheria and secondly that this disease is at first local, and that afterwards it becomes constitutional or general by the entrance of the specific principle into the blood, whether diphtheria be primarily local or primarily constitutional or be in some at 1st local and in other, at 1st constitutional is of course a distinct proposition from that in regarding the relation of bacteria to the malady. and whatever truth may be in reference to one does not effect the other. It is evident that the truth regarding the relation of Bacteria to Diphtheria is either that they are specific principle and therefore cause disease or

that the cause is more subtle not yet discovered which produces such determination of the tissues and blood that they become a nidus in which the bacteria are early and rapidly developed as in a determinate condition of the buccal surfaces and its secretions furnishes a nidus in which the Oidium Albicans springs up, so it is not improbable that those minute organisms found in and upon the tissues in the infectious diseases, as seen in Pertussis, and the bacteria in Diphtheria, will yet be shown to be secondary productions and not causative agents.

I have endeavoured to fulfil the requirements of the University by writing

this essay [illegible] it will [illegible]
[illegible] as [illegible] a original
but as giving the views of different observers
of this most dreaded and fatal of Maladies
the exact pathology of which is so varied
an uncertain each one viewing it from
his own standpoint some claim that
it is a Sthenic form of inflamation with
both local and constitutional Symptoms
the Local in the form of a pseudo-membrane
as in Croup and that it involves the
Submucous Tissue and not the Mucous
Tissue only as in that last named disease
while others claim it to be an Asthenic
form of disease both Local & Constitutional
with no pseudo-membrane locally but
a Slough, saying that there is no
Organizing power in the Blood in this

asthenic form of disease. while others claim it to be asthenic and locally a slough but claim the cause both locally and constitutionally to the super alkalinity of the blood which has no power of organization. an this is the cause of the great depression and slough locally, the views of the last mention observers I shall give below, seeing that there is so much diversity of opinion in regard to the and many other diseases. in regard to their Pathology that is merely hypothetical we are at present compelled to leave it sub judice but by it we can learn a good lesson that is this that we must now and henceforth, be Students if we wish to be intelligent and

-practical physicians [illegible]
to [illegible] a matter, that it may in
future point in price at the cease of
1885+6. The views mentioned above are
thus. Prof Virchow in presenting a paper
on diphtheric membrane at a recent
Meeting of the Berlin Medical Society pro-
tested against the too general use of the
term Diphtheritic making it cover un-
doubted cases of Croup he said that for-
-merly he had, had much difficulty in
effecting a distinction in the minds of
the profession between Croup and
Diphtheria the former term being
used to the exclusion of the latter in
diagnosis and the reverse is true
we hear much of the diphtheritic
membrane and but little of the Croup

In diphtheria there can be no exudate membrane in the fauces as [illegible] that can be expelled as such giving moral to the parts, The so called fauces diphtheritic membrane is no membrane but a slough, The exudated matter stops circulation and a slough results Virchow declares diphtheria to be a parasitic disease. the microbes that abound in the sloughy surface can be inoculated from the spot of inoculation alteration of tissue rapidly extends with an abundance of such microbes present, These germs are not found in the membrane of Croup while sometimes it may be difficult to establish a differential diagnosis Still an obvious Croupous membrane

One distinctly fibrous should not be termed diphtheritic, as regards treatment. Winn thinks that remedies suggested to digest the diphtheritic slough, and thus get rid of it, pepsin, papine &c would have no effect on the microbes also that the solvent can have but little effect or use in the fauces since fibrous membranes do not occur in diphtheria.

This essay is merely one on the Pathology of the disease and not on the treatment and I shall close it by giving the view of the other observer taken from an article written by him called Diphtheria what is it?

Diphtheria scarcely deserves the suffix itis as the term is defined for diphtheria want the universality that

characterizes inflamation, no fever or inflamation can with propriety be called sthenic when the blood will not coagulate readily, the normal state of the healthy functions is the intermediate condition between sthenic and asthenic and any departure from that normal condition is disease therefore I hold that all diseases must be either sthenic or Asthenic in Type either Positive or Negative never neutral

The more the septicaemia in the blood the less it will coagulate and some of our best Pathologists say it is doubtful point whether pus is in all cases the product of inflamation, years ago I was in the habit of considering that the sloughing condition of Diphtheria

was the result of inflammation but
in the light of 24 years experience and
close observation from the initial to
the final case either by evolution or
dissolution, I am now satisfied that
the morbid pathology of diphtheria is
not the result of sthenic inflamation
but a depression of the blood kept by
Carbonuger and no longer susceptible
to normal chemical affinity and
hence vicarious action and elimination
and after mobilizing the Carbonate blood
in the glands we find nature trying
to discharge her functions in a con-
fused way with the vital force on
the retrograde and inadequate to
sustain the plugging system. Thus
we have the morphologic condition

a due quantity and quality of the
blood is conducive to the natural
stimulus to all movement within the
system and requisite to the support
of the vital action thereon a loss or
change in its constituents rendering
it less stimulating must be followed
by depression, (not inflamation)
There may be a loss of constituents
through excessive secretion or
diminution by noxious or improper
quality of the blood incapacity with
the formation of chyle or it may be
through the lungs by bad air
Certain substances introduced
into the system, do, by a chemical
change or a dynamic influence
on the blood so far deteriorate its

Character as to disqualify it for its normal function, I class as concurrent causes deficient decarbonates and suspended nutritive functions for example in cases called Malignant fever such as Typhoid &c hence the depression of action and reduction of Power and positive debility in Diphtheria Blood that has been highly carbonized by noxious gases and improper decomposing food produces many forms of disease but not until after it has become amalgamated with the glandular secretions of part of the System and becomes highly charged with alkaline Carbonates; do we have Septicaemia and that peculiar chemical condition necessary to form. Diphtheria Typhus Scurvy Erysipelas

[illegible] persons whose glandular secretions are diminished and [illegible] dormant are not likely to take diphtheria and if they do they are patients [illegible] likely to be cured and on the other hand those children or persons whose glandular secretions are very active and have profuse excretions if not taken in time are the cases we call malignant, and generally die

It is known that organs or glands excited to unnatural secretions are peculiarly liable to suffer from the influence of miasmata and cold

The causes of disease are exceedingly numerous and yet the susceptibility of local parts and mobilizing force of of chemical affinity gave us different

forms of disease. The predisposition of some people and the predisposing causes rendered particularly so by the chemical affinity, therefore the difference of diseases is not in the local cause but in the circumstances of their application. Hence virulent effluvia may be the initial or producing cause whilst glandular amalgamation of chemical affinity is the place of incubation and the determining cause therefore we have diseases of certain Type.

Abundantly and rapidly exudations are rarely organized and undergo incipient putrefaction, hence in diphtheria, the fungi and Bacteria fallacy dissolves like a phantom at the approach of days. If I may use

[illegible]
law which plays a very active part
in pathological epigenises. Let us
call it the law of analogous formation
and under different cognomens we
recognise different diseases such as
Typhus Erysipelas, Diphtheria &c
all of which are of low type
Just like every organization in nature
Pathological growths require material
for their formation, so in Pathological
Morphologies we have chemical changes
giving us morbid and abnormal [illegible]
manifesting itself in the different types
of disease, [illegible] Pathologists say [illegible]
to be an arrest or suspension of affinity
in the [illegible] and does not assume
the active and passive condition in the

elaboration of that melanotic material and hence I find persons whose glands are dormant or in a passive condition rarely taking contagious diseases.
There are always two classes of substances in the blood the products of decay and the elements of nutrition, The healthy equilibrium of the System requires the dismissal of the former and the appropriation of the latter. Some pathologists assert that we have two classes of morbid Products which we must distinguish from each other, Those which are formed in the fluid secretion (not excretion) possessing special chemical constituents - and as such occur in the parenchyma of Organs and Tissues, Those which do not pre

[illegible] in the blood may [illegible]
the secretions coming there not through
the agency of cell life but because of
the downward course toward an
inorganic condition through which
the secretions are spontaneously passing.
The morbific secretions may have [illegible]
local and chemical causes for their
origin, improper diet, foul air, or
noxious & sewer gas, nitrogenous
decay giving as highly a Carbonated
blood as the remote cause and after
the Maxillary Glands have mobil-
-ized the highly Carbonated blood we
have the Alkaline Carbonates as
the proximate cause and from
thence we have the Constitutional
taint and not the local from the -

constitutional such is the opinion in regard to the modus operandi for diphtheria, I am not ready to admit that diphtheria is so contagious as it is sporadic and infectious (allow me to make a slight distinction between contagion and infection) not so epidemic as endemic, The morbid exudations of diphtheria have a dissolving tendency and liquefaction of the tissue produces by previous chemical affinities therefore the disease or local part loses its vitality and passes from under the normal physiology to that of morbid pathology by chemical laws. From the highly carbonated blood the maxillary glands elaborate a morbid secretion (alkaline carbonates the products entering

circulation giving diphtheria, when the mesenteric glands are very susceptible we get enteric and when the sebaceous follicles we get Erysipelas &c and you will find the blood highly impregnated with carbon then the most susceptible glands are the salient points, The probabilities is that some causes act locally on one organ exclusively, others act generally on several organs, some universally on all; and does so by the susceptability of the different glands and their affinity of chemical relations, hence the vicarious action and the various types of disease When blood and lymph are coagulable and capable of organization and form new living structure then such would be sthenic, not so

in diphtheria (or diphtheritis as some would call it) the blood and the exudations are not coagulable and if so to a very slight degrees and totally incapable of organization for the coagulation is prevented by an excess of the alkaline carbonates (ammonia say Andral and Gavarret) and no granular corpuscles are thrown out and you see this would be asthenic, The blunders in the pathology of diphtheria are the breaking line for such promiscuous treatment and so long as there are such discordant views of Pathology so long will there be a record of melancholy failure and the proffession subject to the withering scorn of skepticism such as Leuco. Phlegmatic Patients

[illegible]
[illegible]
be energetic and faithful for they [illegible]
prove fatal and the disease is called mal-
-ignant upon a careful examination
You find in true diphtheria the Tumefacti
is attended with a softness and flaccidity
so different from sthenic inflamations
Some writers say that in good constitution
the fever in diphtheria is sthenic and
when epidemic of Typhoid character,
Some physicians close analogy betw[illegible]
diphtheria and erysipelas. Pathologically
and relatively. Twin Sisters, I think
there is a great marked difference
for the initial stage of erysipelas
is the Phlegmonous which attack
the areolar and adipose Tissue whilst

diphtheria attacks the glandular system, [illegible] diphtheria and croup and thier analogy. Some physicians talk about the similitude of diphtheria and croup; what a vague idea when from a pathological view there is such a great broad line running so plainly between the Two; Some say there is close analogy. why so, why claim diphtheria is epidemic and contagious? who believes Croup is contagious?, The exudate thrown out in Croup is upon the surface and capable of organizing a membrane whilst in diphtheria the morphylitic condition is underneath the epithelium and only appears superficially after the melanotic condition has liquefied the Tissues

for the microscopic examination of epithelioid cells in different stages; in croup the blood will coagulate and the plasma is capable of organization not so in diphtheria having lost its vitalizing forces and induces the liquefaction of the tissues; where is the analogy? In Diphtheria, Croup and Erysipelas there are more anomalies than analogy In all low grades of disease with the vital forces on the retrograde any form of mercury, sedative, antiphlogistic treatment is strongly contra indicated and would only widen and deepen the road to death; In the treatment of diphtheria arouse nature's sleeping energies with the best of Stimulants and Tonics and correct the vitiated

secretion of the glands, neutralizer the septicaemia of the blood with most diffusable antiseptic which is imperatively demanded, restor the struggling vitalizing forces is the treatment we should be decisive and prompt in our Treatment and not equivocate in a chaos of doubt which is calculated to worry & menace the thoughtful Physician —

I have notice in some cases in which the toxic influence on the heart and nervous system and the patient died as of asphyxia, (some would called it a heart clot) In local congestion of diphtheria, the whole system stands in the depression and enervation — and if the case proves fatal by a powerful action on the nervous syste...

the patient never rises out of the pros-
tration, I have often been deceived by
the insidious approach and nasty death
of some cases of diphtheria, when my appre-
hensions were that an early dissolution
would take place I remained with my
patient and noticed all the manifest-
ation - in the moribund state and often
the nervous system was brought into
great confusion by comparatively slight
exciting causes and the function of
respiration and circulation thrown
into great disorder all premonitory of
death. The fetid sanies from the
nostrils and the offensive slough
and acrid flow from the Tonsils are
indications of a low state of vitality
and why do some physicians call

diphtheria sthenic, the fever of diphtheria is only symptomatic & indicative of prostration and the arborescent manifestation on the Tonsils and adjacent parts are only manitorial of the melanotic condition of the Tissues within Notwithstanding the humoral Pathology of Boerhaave and Stahl and the refutation of Hoffman and Cullen there is a chemical condition which eludes our Treatment; In diphtheria pre-eminently above all claims give diffusible antiseptics and oxygen and in great prostration of all the nervous system give best preparations of Phosphorus give an abundance of sunlight and pure air for they are imperative,

demanded to assist in the excretion of the Highly Carbonized blood and the elimination of the alkaline Carbonates Cleanse the slough with Carbolized glycerine

Why is it that a Baby before dentition cannot be Phyalized? Why are babies at the breast before dentition exempt and bear immunity from diphtheria Because there is no salivary secretion for the first several months and the functions of the Carotid gland are not thoroughly established and the cannot eliminate Phyalism or diphtheria

Gentlemen this was the initial idea upon which I have predicated all my investigations and treatment after the Carotid and submaxillary glands

have matured enough to perform their natural functions then they are capable of mobilizing or eliminating the virus of diphtheria or Phyalism. I consider the glandular system as the incubitis and important factor in the formation of many diseases. at this eventful period of medical History there are some who dare deviate from the long beaten tract of Prejudice and venture professional pride and native cupidity were adverse to the True spirit of justice and Reform. It is not my wish to cast imputations and heap epithets upon the medical proffession but let us be constantly alert to the gross blunders so justly the approbrium of the proffession every person entering upon the stage of

[illegible] as duty [illegible]
ly qualify for the [illegible]
for life is in the care of the Physician
and they are constantly in the sol
itude of Death's damp shades
alas how often pretentions are
received as evidences of capacity
if we cannot eradicate disease
let us quicken our thoughts and
vivify our faith to alleviate the
suffering of Humanity

192 W. Lambard St
Baltimore Md.
Xmas 1885

Eclampsia Puerperalis.

Definition:

An acute affection of the motor function of the nervous system, characterized by loss of consciousness and of sensibility, by tonic and clonic spasms, and occurs only as an accessory phenomenon of another disease, generally of Acute Bright's Disease.

It may, perhaps, be rather too much to say that Albuminuria and puerperal eclampsia are mutually dependent upon each other; but that they occur together in the vast majority of all cases is an assertion that will not likely be disproved. It is, however, by no means established whether albuminuria is the cause of the convulsions, or vice-versa

if the presence of albumen in the urine is due to the manifest derangement of the whole organism effected by the convulsions. It is generally supposed however that the albuminuria is due to Bright's Disease, and that the blood is poisoned with the excrementitious constituents of the urine. It has been experimentally ascertained that the presence of urea in the blood, even in large quantities, does not give rise to eclampsia, and the conclusion that has been reached is that the toxic agent is the Carbonate of Ammonia, supposed to be produced by the decomposition of urea acted on by some ferment and to the pathological chemist.

Other authorities claim that eclampsia

is the result of some blood poison, as yet unknown to science, and assert that the constant presence of albumen in the urine is the effect of the convulsion; basing this assertion on the fact that in a great number of cases the convulsions precede the albuminuria.

Had a median course between these two extremes will probably bring us much nearer the true theory. Let us then acknowledge that the great, common cause is uraemia, due either to a change of urea in the blood, or to a retention of the excrementitious elements of the urine: at the same time, by no means denying the existence of this disease due to other causes entirely foreign to uraemia toxaemia, for insta-

anaemia and cholaemia, or, as is supposed to be sometimes the case, irrita- of the peripheral nerves giving rise to convulsions very like those of eclampsia.

How then, is the albuminuria necessarily the result of Bright's Disease? - By no means; - When the uraemic theory was first advanced, it was assumed that, in a large proportion of cases, the albuminuria and the consequent succession of pathological changes were due to pressure on the renal veins; and this too has, to a certain extent, been experimentally proved. Still we cannot for a moment believe that mechanical obstruction is the cause of all cases, because not unfrequently the symptoms have developed in the early

months of pregnancy, or have not occurred until after delivery of the child.

Morbid-anatomy helps us but little, for the very obvious reason that these cases supposed to be due to mechanical obstruction or to peripheral irritation are necessarily less fatal than those consequent on Bright's Disease; and as we have only the most virulent cases for pathological examination, we have no right to judge from these the etiology of the less-fatal cases.

Regarding the period of most frequent occurrence we cannot but be doubtful, most probably the following is the correct order, Pregnancy, Labor, After-delivery —, but owing to the fact that eclampsia generally occurs

occur in the later weeks of pregnancy, rarely in most cases brings on labor at once, many obstetricians claim that most cases occur during labor.

The attack of eclampsia rarely ever appears without being preceded by some premonitory phenomena that will enable the skilled physician to foretell its speedy invasion. These prodromal symptoms come on at any time from two or three days to only a few hours before the attack. The patients will complain of agitation and malaise: they are very easily excited, are impatient and irritable: they suffer with pronounced dyspnoea, and are attacked by an acute pain in the head, which is generally concentrated over one or more excited point.

This headache resists all ordinary treatment and is an extremely important diagnostic sign: it is generally accompanied by nausea, dimness of vision, tinnitus aurium, vertigo and sometimes by a sharp pain in the abdomen.

After these symptoms have continued a variable time, they acquire a greater degree of intensity. The vision becomes affected so that the patient seems to see as through a mist. The hearing becomes dull: the countenance immovable as if the woman were sunk in deep abstraction, and in reality she slowly sinks into a lethargic state from which she is not easily roused. How while the woman is in this state, the first paroxysm suddenly ensues.

1. The paroxysm of eclampsia can be divided into three stages;

1. Stage of initiatory convulsions.
2. Stage of tonic convulsions.
3. Stage of clonic convulsions.

1. Stage of initiatory convulsions. These most always begin in the face, by a succession of very rapid choreic movements: the eye lids wink rapidly: the ball of the eye rolls around in its socket: the nostrils dilate: the mouth opens and then becomes distorted by the contraction of the muscles on one or the other side: the head inclines to one side and approaches the shoulder. At the same time, the arms begin to jerk, and the fists close tightly. This stage usually lasts about a minute and

is succeeded by, _____

2. Stage of tonic convulsions. Suddenly the countenance becomes perfectly fixed, caught as it were in the midst of a grimace: the tongue is protruded from the mouth and nipped between the closing jaws. The limbs become rigid, the breathing ceases, and there is a moment of complete immobility, when death seems impending. This stage rarely lasts longer than a few seconds. _____

3. Stage of clonic convulsions. Relaxation now occurs, and clonic spasms, due to the alternate contraction and relaxation of the various muscles in different parts of the body, begin. The face first one side

to side; the eye-lids open and close; the teeth grind on each other; the jaws move as though chewing. Respiration is quiet and imperfect, the air being emitted with a hissing sound; the face is swollen and congested. Air, saliva, and blood from the bitten tongue give rise to a bloody foam, which exudes from the mouth, rendering the appearance of the wounded tongue hideous. This stage, though generally short, sometimes lasts for ten or fifteen minutes.

It is succeeded by a comatose condition, due to intense cerebral congestion. The stupor is profound; the face is cyanosed; the breathing loud; the pupils are dilated and insensible.

During a paroxysm, the faeces, the urine, and the contents of the stomach are often expelled by the contraction of the organs in which they have accumulated.

The muscles of the larynx are convulsively contracted, and by closing the glottis, the momentary asphyxia, which gives rise to the congestion of the face and head, is produced. The pharanx is also contracted, rendering swallowing impossible. The muscular fibres of the heart are supposed also to participate in the general convulsion, and so add to the congestion of the surface.

At the beginning of a convulsion the pulse is full and strong, but as the fit progresses it becomes weaker and weaker until it is barely perceptible.

The skin, at first hot and dry, after a while becomes covered with a profuse perspiration; an indication that the fit is about wearing off.

During a spasm the intellectual function is lost and sensation is abolished. The patient is conscious of neither sound nor light, and can be pinched or burned without her knowledge.

The effect of the convulsion in the contractility of the uterus is astonishing; sometimes it remains perfectly passive, the only organ in the body unaffected, and Labor has been known to go on with perfect regularity, notwithstanding the violent, clonic spasms of all the other muscles. Sometimes it participates in the general convulsions, and [illegible]

is hurried so that the child is expelled with very great rapidity, the woman being unconscious of the fact. There are cases on record in which the rapid expulsion of the child has been unnoticed by the accoucher, and the babe has been asphyxiated, for want of proper attention, while lying between its mother's thighs.

The convulsion never ceases abruptly, but gradually wears off; the spasms becoming less violent, the muscles agitated less frequently, and the respiration becoming more and more regular, until finally the patient sinks into the comatose state.

As the coma wears off, it changes into somnolence from which the woman

can be roused by speaking to her.

When the torpor grows less, the complaint of great weariness and fatigue, then after a while the prostration gives way to a feeling of anxiety, the forerunner of a fresh attack.

Termination.

An attack of eclampsia may terminate in recovery, in death, or by giving rise to some other disease.

When a case is about to terminate in recovery, the fits come on after longer intervals, and each one is of shorter duration and less violent intensity than the preceding: in this way the attack gradually wears off.

On the contrary, when death is approaching, the convulsive attacks

are observed to last four, five or six minutes with great intensity; occurring in rapid succession the intervals are passed in a torpor, from which the woman cannot be roused by any external irritants. Death generally takes place between twelve and forty hours after the invasion of the disease, though occasionally it has occurred at the very outset of the symptoms. It may occur in the convulsive state or in that of coma. In the former it is the result of asphyxia; in the latter of cerebral congestion closely resembling true apoplexy. Death may also occur from a sudden arrest of the movements of the heart.

An attack, not grave enough to end in death, may give rise to several other serious disorders; for instance, if eclampsia occur at the beginning of labor, before the os uteri is dilated, rupture of the uterus may result from the violent contractions. Again, the cerebral congestion may be so great as to rupture one of the small vessels of the brain, and hemiplegia will follow. Again, the symptoms of a true meningitis have, more than once, been observed after an attack of eclampsia.

Diagnosis.

The physician may first see a case of eclampsia either during the convulsive state or that of coma.

The former condition must be diagnosed

from hysteria, epilepsy, catalepsy, and tetanus; the latter, from apoplexy, alcoholism and concussion of the brain.

In hysteria, the intellectual function is never entirely lost and sensation is rendered morbidly acute: there is no coma after the fit, and the convulsive movements differ from those of eclampsia. The larynx is not constricted and hence we do not have the whistling respiration as in the convulsion of eclampsia.

Epilepsy, of all convulsive disorders, is most likely to be confounded with eclampsia. The diagnosis is to be made from the previous history: from the fact that epilepsy is so

seldom followed by profound coma;
and by the presence, in eclampsia,
of albumen in the urine.
In tetanus, the limbs are held re-
-latively rigid, and the persistence
of this symptom will determine
this disease from any other.
In catalepsy, if one of the limbs be
placed in a certain position, it
will so be maintained through-
out the whole attack; this one
symptom is diagnostic.
The coma of eclampsia will be
diagnosed from apoplexy, by the
fact that it has been preceded
by convulsions, and also by the to-
tal loss of sensibility unlike the
coma in apoplexy.

[illegible] of the brain, we will have the marks of a blow or fall, together with the absence of preceding. Lastly, In alcoholism, we will be able to judge by the vinous odor of the breath, together with the previous history of the patient.

Eclampsia is a very fatal disorder; some authorities go so far as to say that half of all cases prove fatal; this is doubtless an exaggeration. It is generally stated that under the improved method of treatment the mortality has been reduced to eleven per cent. The prognosis can be made according to the period at which the attack begins, whether during pregnancy,

during labor, or finally after delivery.
Eclampsia occurring after delivery is naturally least dangerous.
The indications for a bad prognosis are. 1. Urine scanty and high-colored with much albumen; 2. Fits violent with short intervals; 3. Profound coma.
The converse is, of course, favorable.
Preventive Treatment.

Albuminuria in a pregnant woman shows a decided predisposition to eclampsia, and whenever albumen is found, all prophylactic means, such as ferruginous tonics and a liberal diet should be adopted.
It has been proposed to administer tartaric acid or lemon juice to prevent the decomposition of urea in the

blood, or to neutralize the carbonate of ammonia already formed, but this treatment has been carried out so little, that no opinion as to its usefulness can be held.

If the bladder or the rectum be over-distended, cathartics and diuretics are to be employed, but the administration must be cautious, for fear of weakening the woman who is already sufficiently debilitated.

When labor comes on and eclampsia is feared, it is proper to give chloroform with the view of obviating the seizure.

Curative Treatment.

When eclampsia has declared itself, it is necessary to differ our treatment

according to the time of seizure, whether during pregnancy, labor or childled: but the treatment during a paroxysm is necessarily the same in all cases, namely, to so act on the nervous system as to moderate central irritability and reduce reflex excitability to a minimum.

The old method of treatment consisted in the free and general bleeding of all cases except the anaemic and hysterical. This was doubtless very wrong and did much mischief in many cases; still many authorities now believe that the revulsion of opinion went too far in putting an end to bleeding in all cases. It is probable that there are occurring in

plethoric subjects will be much relieved by the application of a few leeches.

The treatment used at present, under which we get much better results than ever before attained, is by the liberal use of anaesthetics. Check the paroxysm by the inhalation of chloroform or ether, and continue the anaesthesia by means of chloral-hydrate.

The symptoms of a seizure, or the approach of a repeated paroxysm, are indications sufficient for the administration of chloroform. This agent should not be given during a paroxysm, because the respiration is then so seriously impeded that no obstacle

whatever should be placed to the aeration of the blood.

If chloroform does not succeed in altogether warding off the attack, it will so modify it, that the danger of suffocation during the period of tonic spasms will be materially lessened, and the attack on the whole will be rendered less violent. This agent has in itself done more good than all other former treatment.

Chloral hydrate is another agent which, in this disease, has been found of wonderful efficacy. When given in ordinary sedative doses of gr. xxx, it is safe and usually efficacious. Still, as it is a dangerous agent, care must always be taken in its use.

On July 22nd 1885, Mrs D. aged thirty-six, was delivered of her tenth child at five o'clock A.M. She had a history of previous good health, and had never had any trouble in her former labors. She was attended at this time by a midwife, who reports the labor normal. At 6 A.M. I was called to the case and on my arrival found the woman in the midst of a convulsion: I immediately sent for chloroform and chloral hydrate; while waiting the agents, I gave hypodermatically Morph. Sulph. gr ¼. The morphia did not succeed in aborting the attack, and observing the approach of a fresh paroxysm, I at once anaesthetized the

patient with chloroform; this being accomplished, I administered an enema of chloral hydrate ℥i and after waiting an hour, without a return of the paroxysms left for the night. As the people about the patient were ignorant and not to be depended on, I was afraid to leave any medicine to be given by the attendants, but cautioned the woman's husband to send for me at once if the spasms returned. At 2. A.M. the woman had another convulsion and I then gave her chloral hydrate ʒss by the mouth, shortly after this the patient went off to sleep and there was no return of the paroxysms. The [illegible]

regularly to recovery, and at the end of ten days rose from her bed seemingly in perfect health. I examined her urine during the attack and found it loaded with albumen; Succeeding examinations, however, showed a rapid diminution in the amount, and at the end of a fortnight every trace of albumen had disappeared.

Howard R. Weber.

University Hospital.
Sept. 5th 1885.

Allen Walker

Thesis on Pneumonia

1886

Lobar Pneumonia

Synonyms. — Croupous Pneumonia
Fibrinous Pneumonia — Pneumonitis —

Definition —

An acute croupous inflammation involving the vesicular structure of the lungs, rendering the alveoli impervious to air; characterized by a chill, fever, pain, dyspnea, cough, rusty sputum, & great physical prostration —

Morbid Anatomy

This disease is distinguished by having three stages, or processes, Viz. 1st Engorgement, 2nd Red hepatization 3rd Grey hepatization, but to begin with, this must not be understood to mean that these stages of engorgement, red & grey hepatization occur consecutively in point of time

that is, that one stage does not occur simultaneously through all the area of the lung affected, but that the stages overlap each other, & so that - while one part of the affected area of of Lung, may be in the engorgement state, another part may have reached the red hepatization stage, & so on with the other stage. The engorged stage of Pneumonia, is characterized by the Lung becoming exceedingly vascular, & these changes in the blood vessels & circulation occur which are so characteristic of inflammation, Viz Dilatation of the Blood vessels, the exudation of white corpuscles, with the consequent slowing of the circulation. It is still a disputed question, whether

the Bronchial or Pulmonary vessels
are the chief source of this exudation
but probably both are involved.
The lumen of the Alveoli is diminished
by the distended Capillaries.
The lung involved in this stage, is
of a dark brown, or red color, sometimes
purple, its specific gravity, & its weight
are increased, it is also more friable
less resistant than natural, & during
Autopsy the portion of lung involved
does not collapse, when the thoracic
Cavity is opened, it has a firmer
feel than normal. When cut
into, it yields a reddish frothy
tenacious liquid, dark blood flows
from the distended capillaries.
At the Autopsy, it is said to be

sometimes difficult to distinguish the engorgement stage, from Pulmonary oedema & congestion, but the latter contains no cell elements, so if a stream of water is made to play over a cut surface of engorged lung, the color remains; in Pulmonary oedema & congestion it is washed out.

Second Stage —

This stage so closely resembles the cut surface of a section of the Liver that Laennec termed it Red Hepatization, it consists in the exudation of a viscid fibrinous fluid admixed with white & red corpuscles, & liquor sanguinis, which rapidly coagulates. These exuded fluids coagulate within the air vesicles

& terminal Bronchioles. Some vessels may rupture & as a consequence, there will occur small extravasations
The lung is now much heavier than in first stage, & increased in size so much, so that it is often marked by the ribs. Pressure does not indent but tears it, it is very easily torn breaking down with a soft granular fracture. A cut surface has a remarkably granular appearance, but more especially when the tissues are torn. It contains no air. It cannot be artificially inflated & there is absence of crepitation. Throughout this stage there is very little alteration either in the alveolar epithelial, or alveolar walls. The Pleura nearly

always participates more or less, in the inflammatory changes, when it occurs in a superficial part. It loses its normal translucency & becomes opaque, hyperæmic, & crated with lymph. When the second stage has continued some days, it becomes pale & white in color, owing to the individual granulations becoming white in appearance, these are scattered either in groups, or singly, through the surrounding reddened tissue; along with this change of color, the affected tissues becomes gradually less solid & consequently liquifies & more fluid can be squeezed from a cut or torn surface. This Red Hepatization stage, may last from one to several

days.

Third Stage – Grey Hepatization – It must not be understood that there is any sudden transition from that of Red Hepatization to one of Grey Hepatization, for as has been previously remarked, these stages overlap each other. In the third stage the white blood corpuscles continue to migrate or escape from the vessels until the pulmonary alveoli become packed with cells. "So that the fibrinous exudation is no longer visible as an independent material, as it is in the stage of Red Hepatization". "The fibrinous material now disintegrates, & the cells rapidly undergo fatty changes, so

that as usually seen, the alveoli
are filled with granular elements
which in many parts have lost
their distinctive outline" (Green)
The alveolar walls, in most instances
remain unaltered, except when unusually
advanced. The weight, density, &
friability of the lung increases until
the tissue is quite soft & rotten, & a
depression made with the finger,
soon becomes filled with purulent
fluid. The change in color, which
this stage presents which is that of
a Grey, a Yellowish White, is partly
due to the pressure exerted on the
Blood Vessels, by exuded substances
& newly formed cells, & partly, to the
fatty degeneration which these cells

have undergone.

Lobar Pneumonia may terminate

(1) In Resolution (Recovery)

(2) In Suppuration (Purulent Infiltration)

(3) Abscess

(4) Gangrene

(5) Chronic Pneumonia

1st) Resolution is the natural & most frequent termination of Lobar Pneumonia; during resolution the lung is moist & on section, a tenacious puriform fluid readily escapes, when the section is pressed.

The contents are either expectorated or absorbed, & the lung returns to its normal condition.

2nd) When purulent infiltration occurs when resolution is retained

& portions of the coagulated exudation undergo purulent transformation, changing from a yellowish, to a greenish-yellow color. Abscess may follow purulent infiltration, & is caused by the Lung structure becoming involved in the purulent disintegration. The formation of an abscess is a rare result of Pneumonia, & is most commonly found in those persons having a bad constitution, especially those addicted to the abuse of alcohol The abscess is more common in the upper, than in the lower lobes Gangrene of the Lungs, may result from blocking up of the Bronchial or Pulmonary Arteries, by or from

the injurious influence of septic inflammatory products, which may occur at any stage of the disease It however rarely occurs except in old age, & in Chronic Alcoholismus & in very much debilitated constitutions. Chronic Pneumonia, occurs when resolution is delayed, & an interstitial inflammatory process, is set up so "that the Alveolar walls gradually become involved, these become thickened by a new growth of fibro-nucleated tissue, & thus is produced more or less fibroid induration of the organ". This termination is rare. "The most frequent seat of Lobar pneumonia is the lower lobe of the left lung

then the upper lobe of the right,
the middle lobe of the right lung
being least frequently involved"
(Loomis).

— Etiology —

The specific cause is unknown.

We will consider predisposing
causes first, taking the causes
of Children (M. M. Pellet & Barthez
state that of two hundred & forty
five cases observed by themselves, only
fifty eight, or a little less than
one fourth occured in Children
previously in good health.
Authorities differ on this question
for "Meigs & Pepper" state that the
proportion of cases in which Lobar
Pneumonia occurs in private practice

as a secondary affection is much smaller since of fifty two cases observed by them only seven were secondary. Injury seems to be a predisposing cause, from reliable data, it appears that Lobar Pneumonia is five times more frequent in the first two years of life, than in the whole succeeding eighteen. Sex does not seem to make any difference except when the female is less exposed to the vicissitudes of the weather than the male. The proportion of Males to female attacked is three to one.
It is most common in winter though cold alone does not seem to be a cause for it is unknown in the Polar regions it seems to be due more to atmospheric changes than to continual cold or heat.

Poverty & bad Hygienic surroundings are predisposing causes, since it is a well established fact that Pneumonia occurs oftener amongst the poor than the rich. Then we have Pneumonia following injury. Old age is also a predisposing cause.

Symptoms —

Begins by severe & prolonged chill (in children convulsions) the chill generally begins in the night & is usually intense & prolonged, lasting from a half hour to three hours, there is also anorexia, headache & thirst; the countenance wearing a flushed & anxious expression. Urine is dark & scanty with diminished chlorides the bowels are constipated, & the

tongue coated, these symptoms continue more or less marked until the fifth, seventh, or eleventh day, when a crisis occurs, though the defervescence is usually reached between the fifth & ninth day.

There is a peculiarity in the respiration of Pneumonia, which is not observed in other acute diseases, for in any other disease, the respiration increase with the pulse rate, not so in Pneumonia, for the respiration in the latter may be Sixty to Eighty per minute, while the pulse rate may not be over a Hundred per minute.

The respiration is panting, not catching in character, it varies from thirty to eighty per minute. Dyspnea is not

always constant, though frequent
Pain in the side rarely continues
beyond the third or fourth day, if
it continues much longer, it is an
evidence of Pleuro Pneumonia.
The especial characteristic of this
disease, is the expectoration of a
rusty, brickdust colored sputa, this
sanguinolent sputa is remarkably
tenacious & sticky, this tenacity
causes the difficulty of expectoration
it occurs about the second day, its
color is due to the presence of blood
if the sputa should turn to a
greenish color, it is considered a
fatal symptom. Swelling of the
veins of the hand in children, is
an unfavorable symptom, after a

crisis take place, convalescence is established, & recovery rapidly follows. Senile Pneumonia generally ends fatally, a sudden rise or fall of temperature preceding the fatal issue. When abscess occurs the fever is of the hectic type, & is accompanied by rigors & sweats, the sputa is fetid consisting almost entirely of pus. Death results either from exhaustion, or from the abscess opening into the Pleural Cavity or sac.
Physical signs are the most reliable evidence of a Cavity. When gangrene occurs it is characterized by greenish sputa, having a sickening gangrenous odor, in fact the whole body has an offensive smell.

Typhoid Pneumonia is a term applied to those cases which are accompanied by signs of extreme prostration, very high temperature & profuse protonged exudation. Sordes collect on the teeth & gums it may be accompanied by glandular swellings, it may follow Bright's disease. Erysipelas, Alcholismus, or Phlebitis, recovery may take place, but is always slow & tedious. Then we have Bilious Pneumonia which mostly occurs in Malarious districts. This is accompanied by intense congestion of the liver, the result of venous stasis from pulmonary obstruction, a Catharhal Jaundice, then we may have malaria as a complication, it is then termed

Malarial Pneumonia. In this case the patient undergoes distinct intermissions, returning each day with increased severity. It is said to be peculiar to old age.

Physical Signs —

First stage. The physical signs of the first stage, are usually present within 24 hours from the commencement of the attack. If the pneumonia begins in the central portion of the lung, the signs of the first stage may be delayed till the third day.

Inspection. In the first stage there is deficient movement of the affected side. The side unaffected moves as in health.

Palpation. The vocal fremitus

is increased, or more distinct than normal, the increase is according to the state of congestion.

Percussion. In this stage there is very little difference in the percussion note from normal, only a slight dullness, indeed in some cases there remains a slight tympanitic note till the end of first stage has been reached.

Auscultation — Before the exudation commences, which has been called the dry stage, there is heard a feeble vesicular murmur, but as the congestion becomes well marked, there is sometimes heard what is termed "Crepitant Rales", these are fine crackling sounds, which have been

listened unto the crackling of salt when it is thrown on to hot coals they do not cease even in the act of coughing. They are most distinct during inspirations. These crepitant rales are not always present.

Second Stage

The signs in this stage are more diagnostic than in either of the other stages. Inspection shows the healthy side to expand normally in some cases the movement is exaggerated, while that of the affected side is markedly diminished indeed there may be complete of motion on the affected side. Palpation. The vocal fremitis is markedly exaggerated though in

some cases, it is so slight that it can hardly be detected when the Pneumonia is central, it is said to be normal.

Percussion. There is marked dullness over the affected parts, with an increased sense of resistance, the nearer the hepatization is to the surface, the more marked the dulness becomes, there is increased resonance over the unaffected lobe.

Auscultation; in this stage we have harsh, high pitched "Bronchial Respiration, which is generally of a metallic character, this only takes place when the air cells are completely filled with the exudation: then we may have Bronchophony

Pectoriloquy, which is heard over the whole of the consolidated lung. Bronchophony is produced by the same physical condition of lung as ~~is~~ bronchial respiration. In old age the signs are not so distinct, except that we have more marked tubular breathing than in adults. Egophony is also frequent.

– Third Stage –

There is no abrupt transition from the second to the third stage, consequently the signs of the early stage differs little from those of the second stage

Palpation – When resolution begins, the vocal fremitus becomes lessened.

Percussion – Dulness on percussion is of all signs, the last to disappear. Auscultation – The principal change in this stage takes place in the breathing, which is changed from Bronchial to Vesiculo-Bronchial & finally to normal respiratory murmur. The crepitant rale, also returns, but is soon superseded by the wasting subcrepitant rale (Rale Redux) & mucous rale. Bronchophony changes into exaggerated vocal resonance, which afterwards give place to normal vocal resonance. – Complications – Pleurisy – Capillary Bronchitis. Emphysema. Pericarditis – Granular degeneration of the heart muscle. Rheumatism. Gout & Jaundice, any one of the which may exist

as complications.

Differential Diagnosis —

Pleurisy is more often confounded with Pneumonia, than any other disease but the point of distinction is that in Pneumonia, we have high fever, characteristic sputa, harsh, high pitched Bronchial breathing, increased vocal fremitus & resonance, & very seldom displacement of the heart, the reverse occurring in Pleurisy the breathing being catching, not panting. Oedema of the lungs can be distinguished by its presence on both sides, & by its occurring on the most dependent portions & by the watery expectoration. It may be mistaken for Acute Capillary Bronchitis but in this case the temperature will be lower, there will be no Bronchial breathing

& there will be no dullness on percussion
Cyanosis is marked & the expectoration
Muco-purulent in Bronchitis. From Lobular
Pneumonia, because it develops in both
lungs, & Lobar Pneumonia is a self limited
disease, but the former having no fixed
duration, there is also a difference between
the two in their ranges of temperature, the
exacerbations are more irregular, in the
former than the latter, & in Lobar Pneum-
onia there is a more rapid rise in
temperature. — Prognosis —
The prognosis depends a great deal upon
the age of the patient, & upon the extent
of the inflammation. The mortality
is greatest in infancy & old age
Double Pneumonia is very seldom recovered
from. Pneumonia of drunkards almost

invariably terminate fatally, also the complications are very grave, indeed are mostly the cause of death in this disease

— Treatment —

In the proper treatment of Pneumonia there is a vast difference of opinion among eminent Medical writers, especially in the matter of bloodletting, though the weight evidence at the present time seems to be against general bloodletting, though some authorities never bleed at all in this disease. Prof. Loomis says, page 97 in his new Practice of Medicine, "agents for the arrest of local inflammation have no place here, hence venesection, once generally practiced, has been almost entirely abandoned. A careful study of the pathology of Pneumonia

not only leads to the conclusion that bleeding does harm, but it strongly contraindicates of all these agents which have been employed for the arrest of simple pulmonary inflammation; Hence Veratrum Viride, Aconite - Antimony - Calomel Tartrate of Potash & Antimony &c" (Loomis)

This is a sweeping statement & I think errs in the opposite extreme, for while I believe indiscriminate bleeding is most certainly injurious, still I think there are numerous cases, where the pulse is full & bounding, in a vigorous plethoric patient, & the fever is high; a moderate venesection is the very best treatment that could be adopted; Even Dr Loomis on page 98 says "The application of

leeches, followed by a soothing fomentation will relieve the pain in the side & may be of service." Now this seems to me good sense, but is it not a contradiction of what I have previously quoted from page (97) when he says that bleeding does harm

Our own Learned Professor of Practice Prof. McSherry, stated last session "that when bleeding is properly used it is in the earlier stages, & only in plethoric patients".

The treatment I would therefore adopt would be to give at the onset full doses of Quinine Sulph say (gr 40) per day.

Warm fomentations such as a hot linseed poultice, or in case the chest

ice a cotton batting, covered with oiled silk, this is especially useful in children. Opium in some form, as in Dover's powder, or better still, Morphia Sulph, superdermically until the system is brought fully under its influence, for a few days until infilhation is completed, This treatment lessens the chances of heart failure, besides being a great relief & comfort to the patient during the first few days of his struggles Absolute rest in bed, in an easy unconstrained position, in these cases is extremely important. The sick room should not be too warm or too cold, a medium temperature of say between (65° & 70° F) the room

should be moderately large & well ventilated, taking especial care to avoid any draughts blowing on the patient. The careful use of stimulants in the form of Brandy or Whiskey a tablespoonful every two, or three hours; is very good to avoid heart failure, but this must only be used to meet the indication such as a feeble & irregular pulse in third stage.

Ice should not be used on the chest. Turpentine stupes are often beneficial. I am against the use of Veratrum Viride, or Antimony in any shape. Aconite may sometimes be cautiously used but is dangerous in the Anaemic

Another point which must never be forgot, Keep the contents of the Bowels soluble.

The food should be highly nutritious & in a fluid state, such as Milk Beef tea = Chicken Broth, soft boiled eggs &c.

During convalescence, the administration of the Elixir of Quinine & Iron; Codliver oil, or the wine of the Lacto-phosphate of Lime, are very beneficial.

When there is distressing cough, a 1/20 gr of Morphia sulph. every two hours, or an expectorant such as Senega & Turpentine, combined with a Saline treatment

The only application of cold is

sponging the patient with water if it is agreeable to him, as it very often is, by reducing the temperature.

A

Dissertation on

Typhoid Fever

Submitted to the Examination of the Faculty of Physic, University Maryland For the degree of Doctor of Medicine.

T. J. Shreve

University Hospital

Sep. 5th 1885

As we trace the acts of man from generation to generation, we are struck with the fact, that the science of medicine is continually advancing with mighty strides. Where once many diseases by their violence appalled all who encountered them are now under controll. We have specifics for some, for others, we can assist faged nature to regain her vigor. Although in Typhoid fever we can not cut short an attack yet we can alleviate the pain and by treating the symptoms as they arise

support the patient untill nature can throw off the poison. Typhoid fever is described as a continued fever, characterized by an inflammatory affection of the agminated and solitary glands of the intestines, gastro-intestinal disturbance and a peculiar rash. It occurs mostly in an endemic form, but occasionally as an epidemic. The name Typhoid was first introduced by Louis, signifies Typhus like in fact formally was confounded with that disease. Various other names have been suggested. The German writers seem to prefer

the name, abdominal typhus or Ileotyphus. The disease occurs in all climates + places, but is most frequently found in the temperate zone. The Prodromic stage continues two or three weeks. It comes on with an undefinable feeling of malaise and loss of appetite. Although anorexia is generally present there are exceptions; in these cases appetite is preserved but food is not asked for, owing to the mental condition present. The patient does not care to read it seems to hurt his eyes. About the 6th or 7th day

he complains of nausea irregular chills, flushes of heat, increased frequency of pulse and elevation of temperature. The character of the pulse is quick & vibratory, it denotes increased action, but not increased power of the ventricular systole for it becomes feeble & compressible in proportion as it is frequent. Under these circumstances the first sound of the heart is notably weakened & may be inappreciable. The bowels may be loose, but constipation is often present. The tongue is coated & the papilla

are enlarged. Epistaxis is often present, but is not dangerous untill about the 3rd or 4th week There may be head ache accompanied by dizziness & staggering. There is usually more or less flushing of countenance, latter on there is a dull listless expression, which depends upon the mental condition. The surface presents moderate capillary congestion like that produced by cold it is due to paresis of the peripheral arteries. Diarrhoea generally sets in about the 2nd week. There is tenderness & gurgling upon pressure in right illiac

fossa. Febrile symptoms with vomiting appear about the 10th or 12th day. Rose colored spots generally make their appearance about 2nd or 3rd week and extend over a time of about 18 or 20 days they show themselves upon the abdomen first & are apt to occur in crops of 20 or 30 at once. One crop disappears & others will take their place, spreading upwards over chest & downwards over lower part of belly. They are about the size of the head of a pin raised a little above the skin of pinkish color & fade upon pressure. The pulse that ranges about 100 in first week will run up to 120 in second. If pulse exceed

120 there is imminent danger. Temperature runs up to 104°, if it reaches 106° it is very dangerous. The temperature is highest in the evening between 7 + 8 O'clock, at its lowest about 9 O'clock in the morning. Every successive day the temperature falls in the morning but not so low as on the morning previous, the maximum being reached about the 6th or 7th day after the febrile symptoms have set in. If prognosis is favorable, about the 4th week the morning temperature will decrease + often falls to normal A sudden + continual rise of temperature indicates inflammatory

complications. If there is a sudden fall of temperature too or below normal, hemorrhage, perforation of the intestine or the approach of death may be suspected. Delirium also makes its appearance about the 2nd week. The patient continually mitters to himself & picks at the bed, jumps up suddenly & tries to leave the bed. The senses are blunted, flies crawl over the conjunctiva without his knowledge, he does not even ask for food & drink. In grave cases the controll over the sphincters is lossed, feces & urine are often passed involuntarialy in the bed. The stools are watery, of a

yellowish green color & give alkaline re-
action. Involvement of Pyers glands
is indicated by threads of fibrin in
the stools. Deafness in one or both
ears is often marked accompanied
by dilation of the pupils. Hemorrhage
may take place within the bowel
without any external manifes-
tation externally; it may be
slight, moderate or profuse & may
occur only once or there may be
many recurences. Uterine hemorrhage
is not uncommon & is not limited
to the period when menstruation
should take place. When inter-
nal hemorrhage occurs in preg-
nant females it may be followed

abortion but is not necessarily fatal. Changes take place in Pyers patches about 3rd. or 4th. week & may go on to perforation of the intestine, this is rare in the large intestine, but may occur at any time in the small intestine after the ulcerative process has been fully established, but it usually occurs during convalescence & even after apparent recovery; is seen oftener in ~~wom~~ men than in women & is very rare in children. Peritonitis from perforation is generally fatal; the larger, the perforation, the more suddenly is it established.

When temperature reaches 102° the urine is generally scanty & of high specific gravity this continues untill convalescence when it again becomes abundant & of low specific gravity. During the disease the urea & uric acid is increased, the coloring matter is more abundant & during the hight of fever albumen is not unconomly faund in urine. Urine is sometimes retained & owcing to the blunted perception of patient may be dribling in bed without his knowledge. The average duration of convalesence is from 1 to 2 weeks, some-

times it is rapid & the temperature quickly falls to normal; but generally it is gradual & exacerbations of fever are liable to occur for some days after the appetite, mental condition, & other symptoms denote rapid restoration to health. The temperature may be kept up by complications which persist after the career of the fever is ended. A temporary fever is apt to occur when the food is changed from liquid to solid. Relapses of Typhoid fever sometimes occur. A return of the fever may take place after 10 days from the commencement

of convalescence & the patient pass through a second attack, the eruption & other characteristic symptoms being reproduced. The duration of the second attack is shorter & the severity greater than in the first, but a fatal termination is rare. Typhoid fever may be complicated with thrombosis of the iliac or femoral vein on one or both sides. Progressive emaciation & death from inanition sometimes occurs, but generally nutrition becomes extremely active after an attack of Typhoid fever & the patient attains a greater weight than before

The characteristic lesions of this disease are situated in the agminated and solitary glands of intestine, spleen & liver. Agminated glands are glands grouped together forming Peyers patches, they are ½ inch in diameter, oval & joined to each other by mucous membrane. There are four stages of the morbid process in the intestine. In the first week of the disease are developed congestion & simple inflamation of the mucous membrane of small intestine, together with swelling of a certain number of solitary follicles & agminated glands. In the second week, general congestion of the

mucous membrane diminishes, the swelling & infiltration of the solitary follicles & agminated glands followed by necrotic changes in connection with the formation of Typhoid ulcers In the 3rd week the process of ulceration is completed. About the 4th week reparative changes in these ulcers begins. Although different stages of the lesions are often found in the same case, the changes are most advanced in the small intestine near the illeo-caecal valve. Inflammatory changes seldom extend higher than four feet above the illeo-caecal valve. More or less enlarge

ment of the mesenteric glands is always associated with the intestinal lesions. The spleen is enlarged of a dark red color & is softened, later it brakes readially under pressure & may increase to two or three times its ordinary size. The liver also becomes enlarged & congested but not so much so as the spleen. It may undergo parenchymatous degeneration together with a like change in the kidney, cardiac muscles & glands of the stomach. The degeneration may be produced both by infectious blood changes & high temperature. Changes in the lunges

are present in nearly all cases of Typhoid fever. Congestion & inflammation of the bronchial mucous membrane is generally present. Animal decomposition favors, but does not produce or generate the poison that originates Typhoid. The poison is eminently a specific one eminating from some persons excretions. When first passed it is not very active, but becomes so & develops rapidly when thrown in piles & allowed to stand; therefore the excreations of persons suffering from this disease should be thrown in pits dug for that

special purpose; they should be first disinfected with Ferri Sulphas & Murriatic Acid. Diagnosis:-
Typhoid fever is to be distinguished from other essential fevers especially Typhus, Remittant & Typho malaria. It is claimed by some that Typho Malaria is a distinct disease where the symptomatic phenomina of Typhoid & Malarial fever are commingled in variable relative proportions in different cases. The points which are to guide us in makeing diagnosis are as follows (1)st The gradual development (2)nd The absence of marked remissions (3)rd The abdominal

symptoms, as diarrhoea with the characteristic appearance of stools, tympinitics, tenderness in the illiac region + gurgling. We cannot place too much reliance in the eruption, for rose colored spots occur sometimes in other affections. (4)th The autumnal season, + the youth of the patient. These being considered, with the absence of features distinctive of other affections, generally render the diagnosis easy after a certain duration of the disease The local affections that Typhoid fever may be confounded with are, meningitis, tuberculosis +

enteritis. Acute mengitis, as distinguished from typhoid fever, is characterized by more intense cephalalgia, by intalerence of light & sounds; early & acute delirium. There is generally constipation: the abdomen is not tympanitic but frequently depressed & iliac tenderness is wanting. The differential diagnosis is required chiefly in children. Typhoid fever may also be confounded pneumonitis when the latter exists as a complication. The differential diagnosis is to be based on facts which show the existance of fever prior to the

occurence of the pneumonia, & also on the events characteristic of the fever namely, the abdominal symptoms & eruption. Mortality in Typhoid fever is about 20%. Complications as pneumonia, intestinal hemorrhage, peritonitis or pre-existing disease as chronic disease of the kidneys may lead to a more fatal termination. Usualy the severity of the abdominal leasions is the cause of death A temperature not running over 103° or 104° between the 8th or 9th day has a good bearing upon a favorable termination. The augury is also good in cases where the

first sound of the heart is strong, no ataxic symptoms, adynamia not great, the pulse not very frequent or feeble & no serious complications. The prognosis never the less should always be guarded for sudden coma & perforation of intestine are not less likely to occur in mild than in severe cases. In cases where temperature does not run over 103° in the first week or two, no medicinal treatment is required. The room should be kept at a temperature of about 60°. Carpets & all woollen goods must be

removed & strict quiet enjoined.
The diet should be fluid exclusively. Milk ranks first; butter milk is often preferable to sweet milk. Beef tea is good but should not be too long continued. It was at one time supposed that the cold bath, quinine & an emetic would abort the attack but this has been found not to be the case. Typhoid fever can be guided but cannot be arrested. In the 2nd or 3rd week when high fever with weakness of heart is present, the cold bath to reduce temperature & quinine to stimulate heart

may be used with good effect. When cold bath cannot be used the wet pack or cold sponging is very comforting to the patient The hypodermic use of Hydro Bromate of quinine is highly recommended If the stools do not exceed 3-4 a day during the 1st or 2nd week, astringents are not called for. but in 3rd or 4th week they may be used with advantage as profuse diorrhoea may set up peritonitis. When the tongue is red hard & coated turpentine given in emulsion has wonderfully good results. & turpentine stupes are very

beneficial in tympinites. In
delirium when the hearts action
is feeble Opium is our sheet
anchor of safety, given in small
doses as gr 1/16 - 1/32; but when del-
irium is mild the Bromides
are sufficient. In perforation
of intestine Opii should be
given hypodermicaly so as
to controll the perestalic action
of the bowels, thus lessening
spread of inflamation & quiets
pain Hemorrhage from the bowels
if small in amount during
the 1st or 2nd week needs no
treatment, but if later Gallic or
Tannic acid & Opium are good

but no remedy equals Turpentine in doses of XV gtts in emulsion every two hours & cold applied to abdomen Stimulants should be used when the first sound of the heart is feeble. When hypostatic pneumonia presents its self as a complication it also requires treatment. the position of patient should be changed from time to time. Carbonate of Ammonia & when constipation exists an enema of warm water & soap may be given. The Germans reccomend Calomel. The position of patient should be changed

often so as to prevent the appearance of bed sores which show themselves first as a red blush upon the parts exposed When they occur the parts should be bathed with some agent to harden them as Alcohol or Carbolic Acid A relapse, is treated exactly like the first attack.

A

Paper on

Fracture

By

T. A. Leary.

1886

Fracture.

In writing on the subject of fracture I have adopted that mode of treating it which has been employed by the authorities I have consulted. That is, I first explain what is meant by fracture and its varieties, with an explanation of each. Secondly, I set forth the general causes. Thirdly, I enumerate the general signs, and give the differential diagnosis. Fourthly, I explain the method of repair, and state the general treatment.

Fracture and the Varieties of Fracture.

Fracture, used in a surgical sense, is a solution of continuity in bone or cartilage produced by violence.

In 1884 (Hamilton's Surgery) fractures

forms of fracture are noted. In 1857 (Erichsen's Surgery) two forms of fracture are noted, with an eleventh referred to as an anatomical refinement. In 1841 (Gibson's Surgery) seven forms of fracture are noted, and the binding of twine is, by Gibson, said to be a partial fracture, thereby making an eighth. If the number of forms of fracture were to decrease as rapidly from 1841 down, as it does from 1884 to 1841, we would have four forms of fracture in 1800, two forms in 1750, and one form in 1700. Although I have no history to sustain me, I think, from the above reasoning, I am warranted in stating that in 800 A. D. all forms of fracture, now recognized by us, were known by the genus

term fracture. [illegible] that we now have to define the different varieties having been instituted since that date. I do not mean to say that the forms of fracture were not so numerous then as now, but I do mean to say, that it is more than likely the surgeon of that date had only one term to define fracture where we have fourteen, and even more if we consider the names given to special fractures of certain bones, as set forth in text books.

However as we are not living in the year 800, but in the year 1886, I will describe the following fourteen varieties, viz:— Complete, incomplete, single or simple, commimited or multiple, compound, complicated, double, transverse, oblique, longitudinal,

serrated, denticulated, impacted and punctured.

A complete fracture is one in which the line of fracture traverses completely the length or breadth of the bone.

An incomplete fracture is a partial separation of bone, and includes three subdivisions. First, a bending of the bone in which it is assumed that a certain amount of lesion exists, and to this form the names of interstitial and interperiosteal have been given. This is the fracture referred to, in Erichsen's Surgery, as an anatomical refinement, and in Gibson's Surgery as a partial fracture. Second, a partial fracture otherwise known as a green stick fracture, which is common to young children, and

consists [illegible] often [illegible] [illegible] [illegible] [illegible] denticulations. Third, fissure or incomplete fracture of older bones. Common to the bones of the skull, and is often seen in gunshot wounds of the extremities. This form is rarely, if ever denticulated.

A single or simple fracture is one in which there is but one line of fracture.

A comminuted or multiple fracture is one in which the bone is broken in several places, or is crushed to pieces. Such fractures were found in the subject described by Professor Tiffany as a surgical mind. The man collided with a locomotive, and his bones were broken in many pieces.

A compound fracture is one with which an external wound is connected. The external wound may have been produced by the same force that fractured the bone, or it may have been produced by the protrusion of a

[illegible] fragment of the bone, through the soft parts.

A complicated fracture is one when a dislocation, a rupture of a large vessel, a wounding of a large nerve, or all three occur in connection with the fracture. Or further, it is a fracture connected with other injuries than a simple external wound, which is defined as a compound fracture. It is often connected with a syphilitic taint. A complicated fracture would be represented when ribs are broken and wounds inflicted, upon the heart and other internal organs, by the fragments. In the Fall of 1884 I saw a gunshot injury which presented an example of a compound, a comminuted, and a complicated fracture. The [illegible] was broken in many pieces by the passage of thirteen pistol balls. The external wounds, and the lesions of the vessels being produced by the same cause.

A double fracture is one in which the con-

spending bone of each side is broken. [illegible] fracture exists when both femurs are broken.

A transverse fracture is one in which the line of fracture is perpendicular to the axis of the bone. It is generally produced by direct violence, and is also a result of muscular action. In the latter case the fracture is seldom attended with much injury or displacement. Transverse fracture occurs most often in the young, and in the articular extremities and processes of bone. It rarely occurs in the shafts of long bones.

An oblique fracture is one in which the line of fracture is inclined to the axis of the bone. It, unlike the transverse fracture, is produced by indirect violence, and is attended with more or less injury to the soft parts. It occurs most often in the shafts of long bones.

A longitudinal fracture is one in which the line of fracture is parallel to the axis of the bone. This [illegible]

a fracture is most often the result of gunshot injuries. The fracture frequently runs into the neighboring joint, and it is this that makes the fracture more serious.

A *serrated* fracture is so called on account of the line of fracture's resemblance to the teeth of a saw. It occurs most frequently in old age and near the extremities of long bones.

A *denticulated* fracture is one in which long spicula of bone are found. It occurs most often in youth, and near the center of long bones.

An *impacted* fracture is one in which one fragment is driven into another. They generally occur around joints, and are frequently illustrated in extra-capsular fractures of the neck of the femur.

A *punctured* fracture is one produced by a penetrating weapon. Examples are found in fractures of the skull, and in fractures resulting from gunshot injuries, and these

produced by the bayonet or arrow.

Special [illegible] to special fractures of certain bones. Such are Colles' fracture of the radius, and Pott's fracture of the fibula.

Separations, by violence, of the epiphyses from their diaphyses, are termed epiphyseal separations.

General Causes of Fracture.

General causes of fracture are predisposing and exciting.

Predisposing causes are found in mollities ossium, fragillitas ossium, and most likely all diseases that impair the tone of the general system. Sex is a predisposing cause. The male more often suffering fracture because, more often exposed to exciting causes. More fractures occur in cold weather than in warm, so we can consider cold under this heading. Age has a decided influence on fractures. Youth predisposes to partial fracture. In old age complete fracture is the

rule. In youth the fracture is most often transverse. In old age the fracture is most often oblique and comminuted. The so-called pipe-stem fracture occurring frequently. The position and shape of bones may also be classed as predisposing causes. Those most exposed and the long bones, being the ones most often broken.

Exciting causes are mechanical violence and muscular action. Mechanical violence may be either direct or indirect. When the fracture occurs at the point where the violence is received, it is produced by direct violence. Examples are found in gunshot injuries. Indirect violence may produce its effect in two ways. In one instance the violence is received at one point and expends itself at an opposite point. This form of indirect violence is called counter-stroke. Examples of fractures produced in this way are found in the skull. In the other form of indirect violence the bone is broken by

[illegible] pressed between two forces. A [illegible] fractured by pressure exerted in front and behind [illegible] an example of a fracture produced in this way. A person may jump to the ground from some elevation and fracture the fibula. Here the resistance of the ground on one hand, and the resistance of the body on the other hand are the two forces producing the fracture.

Muscular force alone not unfrequently produces fracture. The bones most frequently fractured in this way are the patella, humerus, olecranon process of the ulna, femur, tibia and calcaneum. The fractures produced by muscular action are for the most part transverse, and are not accompanied, as a rule, with much laceration or displacement, and consequently are more speedily united, and generally without deformity.

That fractures occur in utero is a well known fact, but the causes of the fractures are not always to be

[illegible] at. [illegible] directly upon the belly of the mother, contraction of the [illegible] and forcible delivery by the accoucher are some of the causes to which these fractures have been ascribed.

General Signs of Fracture and Differential Diagnosis.

The general signs of fracture are crepitus, [illegible] mobility, spontaneous displacement and loss of function.

At least two of these are generally necessary for determining the existence of a fracture. None of them will hold good in all cases.

Crepitus is the grating sensation produced by rubbing together the broken ends of bone. It can be appreciated [illegible] by hearing and touch. In partial and denticulated fractures the sound produced is one of a click. This sign does not always exist. Sometimes the fragments cannot be approximated. [illegible] may be impacted, and in some cases of [illegible]

crepitus cannot be obtained. When the fracture has existed for some time, crepitation [illegible] and, perhaps, entirely obliterated. Again the sound may be similar to that found in the case of an inflamed joint, and thus mislead.

Preternatural mobility occurring at any point is a sure sign of fracture. In case preternatural mobility occurs at a joint the surgeon must use more care in the examination, in order to determine definitely whether or not a fracture exists. In partial, denticulated and impacted fractures this sign is most often absent.

Spontaneous displacement. When a fracture is reduced it scarcely ever remains so. Mechanical means being necessary to retain the fragments in place. The manner of detecting this sign is to reduce the displacement, and then watch the part, to see if the displacement recurs. In fractures where no displacement occurs this sign, of course, is never found.

Seat of fracture. As a general rule a fracture [illegible]

the part taken from being used, or produces loss of motion. This, however, like the other signs does not always hold. Deformity due to displacement, pain, swelling and ecchymosis occur in fracture, and are also common to other injuries. In arriving at a diagnosis, in difficult cases, the age of the patient, the manner in which the injury was produced, the situation of the injury, and measurement are valuable aids. The examination of corresponding parts of the patient will often render valuable assistance in making a diagnosis, and in most cases it is better to do this. In deciding whether an injury is a dislocation or a fracture, it is, in most cases, only necessary to consider the general signs of each. In fracture we have crepitus. In dislocations crepitus is not found. I have given the exceptions to this sign under the heading of crepitus. In fracture we have preternatural mobility, while in dislocation we have preternatural immobility. The exceptions to this sign

[illegible]

that remains so, while in fracture we are only able to retain the fragment in place by mechanical means. Age, a history of the accident and measurement may render valuable assistance in difficult cases. It is sometimes, sometimes necessary to put the patient under the influence of an anaesthetic in order to complete the examination. In such cases every precaution should be taken to prevent further injury to the patient.

Repair and General Treatment.

Repair. When fracture of bone occurs, the periosteum is torn, except in cases of interperiosteal fracture, and laceration of the blood vessels in the bone, periosteum and medullary tissue ensues. The soft parts surrounding the bone are also more or less torn. From these lesions an extravasation of blood takes place, and if the patient be in a tolerably good state of health, hyperaemia occurs, followed by inflammation with serous and plastic effusions into all the adjacent struc-

[illegible] periosteum [illegible] with [illegible]
near the seat of fracture, by a process of proliferation from
its under surface, and by the subsequent formation of a
cartilaginous laminae of new tissue. The medullary tissue, at
the seat of this lesion, also becomes more vascular and a
process of proliferation is set up. The increased vascularity
is extended in some degree to the ends of the bone itself,
and also to the soft structures external to the periosteum.
If the parts are kept at rest, this process of repair ends in
a speedy union of the periosteum and medullary tissue,
unless some cause, such as extravasated blood, intervenes.
The period at which ossification commences varies with
age, health, and the bone fractured. Beginning sooner in
young bones, in bones of the upper extremities and in
persons of good health. The new bone or callus is distinct
from the parts that have been lacerated by the fracture.
At first a large quantity of callus is formed, which is

[illegible] provisional callus. The redundancy is absorbed at a later period leaving the definitive callus. It is probable that neither hyperaemia nor inflammation is essential to repair; but they are rarely ever absent. The process of ossification or transition of the original cell formations into bone, may be through granulation tissue, fibrous tissue, cartilage and fibro-cartilage, or calcification may occur simultaneously with the formation of fibrous tissue. The bone corpuscles, as a rule, are deposited at many points throughout the tissue which forms the stroma. If this were not the case, it would be almost impossible for union to occur unless the parts could be kept absolutely quiet. Even when a large portion of this stroma is converted into, or is replaced by bone corpuscles, it remains flexible and the bone may be bent to some degree at the point of fracture without disturbing the process of union. When this process of ossification has

[illegible] as to prevent motion of the fragments, they are said to be united. It is at this time that the absorption of the superabundant callus begins, and the medullary canal which has, by the process of union, been occluded, also begins to be reformed in the case of long bones. The absorption having taken place, the bone finally assumes its natural characteristics. The above occurs in the favorable cases. In some cases the patient is in delicate health, or the fragments cannot be exactly coapted, or the fragments or part broken cannot be kept quiet. Any of these things tend to retard union, and may prevent it. If the inflamation connected with fracture results in suppuration, the formation of osseous tissue is delayed on account of the destruction of the connective tissue and the absence of those transitional tissues through which bone is usually developed. When union occurs the deposit of callus is generally

[illegible] and frequently excessive. Epiphyseal separations are repaired in the same manner as fractures at other points. Cartilage never unites by cartilage. If the cartilage of a rib be broken, the union is of bone tissue. In case fibro-cartilage is fractured, the union is generally of fibrous or ligamentous tissue. When a fracture extends into a joint through the cartilage of incrustation, the bone may unite, but the cartilage does not.

Treatment of fractures. In the treatment of fractures the surgeon must first reduce the fracture, and when reduced retain it in place and try to prevent excessive inflamation and other accidents. The fragments should be placed in apposition and the part restored as nearly as possible to its normal shape. If a limb, the length and as shape should be looked to. It is not always possible, even with the aid of anaesthetics, to perfectly coupt the fragments, and it is still less possible to retain them in apposition

[illegible] [illegible]. The muscles exert a powerful force in displacing the fragments, and generally they are stimulated to over exertion in this direction, on account of the irritation produced by the pricking of the fragments, and the force that they exert is to a decidedly better advantage than any artificial means the surgeon can institute to counteract their action. Rest of the part is an important feature in the treatment of fracture, and to gain this and retain the fragments in apposition, the surgeon makes use of splints, bandages and slings. Splints should be light, firm and possess the capacity of adaptation. They are constructed of a variety of materials, such as wood, metal, paste board, sole leather, gauze infiltrated with Plaster of Paris, and so forth. There are a variety of ready made splints which are for the most part useless. The best splint for a surgeon to employ is that which he best knows how to use, and it is generally one that he constructs himself to suit the patient upon whom

[illegible] supplied. Stiff paste board, or [illegible] paste board constructed by pasting a number of [illegible] of paper together with starch, will, in general, answer [illegible] purpose. This can be readily shaped to suit the fancy of the surgeon, and is both light and generally of sufficient firmness. In case of long splints being required, wood is perhaps the best material. Bandages and slings are of common cotton cloth. In applying the dressing, no bandage should be applied before putting on the splints. The splints should be well padded. In cases where splints are not used, the part should be padded before the dressing is applied. The surgeon having chosen and prepared that form of dressing which in his judgement will best suit the case, will then reduce the fracture and apply the dressing. During the first week or ten days, the part should be carefully watched, so that any displacement, which may occur, can be immediately corrected.

All fractures should be watched, and the treatment remedied as the case may require. In cases of comminuted and compound fracture extra vigilance must be observed. In cases of impacted fracture, it is sometimes best not to overcome the impaction, but allow union to occur as the bone stands. In the partial fractures of young children, occuring in the arm, fore-arm and leg, it is generally good surgery to complete the fracture, as the first step of the treatment.

Very truly,
G. H. Leary.

Reference.— Gibson's Surgery; Erichsen's Surgery; Hamilton's Surgery; Notes on Lectures.

Placenta Praevia

Dr Julian Kasten.

University Hospital Dec. 28. 1885.

Obstetrics, with the various other branches of Medicine, has progressed greatly in modern times. Within the last two hundred years, the many means and methods of saving human life have contributed to midwifery, ways previously, unthought dreamt of. Could a practitioner of two or three hundred years ago, step into the ranks of modern obstetricians he would stand aghast at beholding the boldness and confidence with which the physician of today encounters the strange freaks of nature as comprised in the practise of this art. Yet, while

Obstetrics has progressed, and still is progressing in many respects, in certain branches of the art the obstetrician of today stands as powerless as did his forefathers of centuries past. Among these, whilst progress has been made in its treatment, still today in the wide range of morbid phenomena comprised in the obstetrician's art, there are scarcely any regarded with more horror and dread than that of Puerperal Fever. The very fact that, the first evidence of any diagnostic symptom may, at the same time be the death knell of the patient, but adds to this horror. Of this as other forms of pathological [illegible]

some warning or other is given of their distinctive character in Placenta Praevia the admonition is not unfrequently the prelude to the death of the woman. For this reason it is hardly to be wondered at that, in the opinion of the obstetrician, Placenta Praevia is deserving of all the fear which is accorded to it.

<u>Definition.</u> Placenta Praevia is that condition of the placenta in which, instead of being attached to the upper portion of the interior of the uterus in the neighborhood of the fundus it has been implanted either over or partially over the os internum; where it has been

implanted directly — os, it is called Placenta Centralis. Where it is only partially over the os, it has received the name of Placenta Partialis.

Occurrence. Very fortunately this condition is of rare occurrence. Müller gives, in his statistics the number as one in one thousand cases of normal labor. Thirty six to fourty in a hundred mothers, die when this condition is present. Two out of three children die, and of those born alive more than one half die during the puerperal period, as the result of this condition according to the same author.

Aetiology. The cause of this abnormal position of the placenta has suggested many theories to writers on the subject, but it is generally acknowledged by authorities, that it is not well known. Caseaux suggests that the upper portion of the uterus - the usual site of impregnation - is less swollen and turgid than normal and, for that reason it does not prevent the descent of the ovule to its abnormal position. Tyler Smith supposes that it results from the ovule not being impregnated till it reaches the lower part of the uterus. Unusual size or shape of the cavity

may not in producing the result, as it is given by Simpson. The weight of testimony indicates, that it occurs more often in women who have previously born children. It is also of frequent occurrence who have borne children at short intervals.

Symptoms. Very frequently, placenta praevia gives the first indication of its existence by its retirement, and, the consequent hemorrhage during labor. The separation of the placenta is caused by the stretching of the cord to which it is attached, in consequence of the dilation of the cervix,

and the necessary involvement of the fibres adjacent to the part. The degree of separation is commensurate with the size of the presenting part of the child, and the abnormal attachment of the placenta. The uterine contractions cause the pressure of the foetus on the placenta and, either its rupture, or, its detachment. This is natures method of preventing hemmorrhage.

Not only at full term does hemmorrhage accompany this malposition of the placenta, but, also before that time. Before the sixth to the seventh month of pregnancy

it seldom occurs but from that time onwards it is not an infrequent accompaniment. In early cases, it is apt to be small in quantity, and of short duration, and easily controlled. It is to a great extent simply a diagnostic symptom of the trouble. Hemmorrhage after the seventh month may occur in the form of a stillicidium, where it occurs drop by drop for a long time, till the patient sometimes succumbs to exhaustion. This form is very difficult of control. In other cases while the hemmorrhage is great, it does not last sufficiently long.

nor is of sufficient amount to seriously injure the patient.

According to Müller, in Placenta Centralis, hemmorrhage occurs oftenest between the twenty fourth and the thirty sixth week, while, in Placenta Partialis, it happens most frequently after the thirty second week. It must be remembered, that in all forms of hemmorrhage in this morbid condition, that they may be not the forerunner to the most violent attacks of bleeding which before the obstetrician can arrive at the bedside may carry with it the life of the patient. The same serious result.

may attend the first stage.

Abnormalities in presentations. Abnormal presentations of the foetus are very frequent accompaniments of Placenta Praevia. Müller estimates that, in one thousand, one hundred and forty eight cases of this condition there are two hundred and seventy two transverse and, one hundred and seven breech presentations. Prolapse of the cord is also frequently complicates Placenta Praevia, owing to its unusually abnormal attachment to the placenta. Hæmorrhage may result from the existing of blood above the placenta, and, to the rupture of vessels and to its

giving rise to an ichorous discharge, which, trickling over the opened orifices of blood vessels, thus obtains an entrance into the system. The necessarily enfeebled circulation, from the loss of blood, predisposes to the formation of thrombi, which, being carried on through the vessels may cause serious results.

<u>Prognosis.</u> It can be readily seen from the foregoing that the prognosis of Placenta Praevia is as a rule very unfavorable. Favorable symptoms are vertex presentations and constitution uninjured by the loss of blood or other diseases of a depressing charac-

ter. The frequency is the more unfavorable the earlier the hemorrhage, the greater the amount of bleeding, and the shorter the intervals of remission.

Diagnosis. During the first two or three months of pregnancy, the diagnosis of this condition is impossible. After that period, the most characteristic symptom is bleeding from the uterus. Whether it be little or great, it should lead to immediate examination and treatment. In the early period of pregnancy, the hemorrhage is likely to produce abortion. Little pain attends the period of bleeding or expulsion of the fetus.

in this condition. Usually the membranes without rupturing are expelled with the foetus.

Per vaginam examination reveals to us, increased size of the cervix, due to the physiological hypertrophy of blood vessels from the malposition of the placenta. Ballotment reveals little to the obstetrician. Absolute diagnosis is only made when the placenta is actually felt through the os internum. The "rough spongy and granular texture" reveals with accuracy the character of the substance and, consequently, its position in the uterus.

In some cases, we have no symptoms of any such condition until the commencement of labor, when, the uterine contractions are attended with a gush of blood, so great sometimes, as to induce immediate fainting and, if not controlled soon, killing the woman. In other cases immediately after the sudden flow of blood the detached placenta is at once thrown in the vagina, and the presenting portion of the child descending, plugs up the utero-placental vessels and thus to a great extent prevents the severe hemorrhage. In such cases, the result is apt to be

fatal to the child.

Treatment. In the treatment of Placenta Praevia, it must never be forgotten that as long as pregnancy lasts, so long, the mothers life is in danger. In a very large number of cases, hemmorrhage leads to abortion. Abortion under these circumstances, is seldom accompanied by serious results to the mother. It is supposed that this is of such frequent occurrence that, not more than one third of all cases reach the full period. The great danger is that, hemmorrhage may take place when assistance is not near

When the urgency of symptoms call for treatment, we recognize four methods of treatment. First, "puncture of membranes"; second, "plugging the vagina"; third, "Turning the fetus" and fourth, "partial or complete separation of the placenta". In most cases, we are forced to combine these various methods of treatment.

Barnes recommends the adoption of the first method - puncture of membranes. It has for its object, the increase of uterine contraction by the less resistance due to the escape of the liquor amnii. It may temporarily cause an increase in the hemorrhage, but compels

circulation of the placenta, and the presenting part of the foetus is soon brought in apposition with the bleeding vessels, and instantly hemorrhage is stopped. Plugging the vagina can advantageously be combined with this method. The chief objection to this method of procedure is that, it interferes with the complete dilatation of the os. The operation of turning is made more difficult, if this is done, also. But in this condition, the membranes do not have the power of dilating to as great an extent as in ordinary labors. Should it be considered advisable to turn afterwards,

other means are at our disposal for that purpose, as dilators etc.

Plugging the vagina or cervix is of most avail, when, the hemorrhage persists, after the escape of the waters, or, the os is not sufficiently dilated to permit the resort to turning. This may be accomplished, by introducing into the cervical canal a sponge tent of sufficient size to accomplish the purpose. This has the double purpose of dilating the canal, and, being a most efficient plug to prevent the escape of blood. It should not be left in too long, because of the danger of

decomposition. It does not accomplishes the same object with much less danger. Uterine action should be induced, while the cervix or vagina is plugged, to induce dilatation of the cervix, or that the labor can be completed as soon as possible. We should examine the vagina repeatedly to see that the hemorrhage does not persist after the plugging of the vagina. This may have the effect of stopping the bleeding altogether, and when the plug is removed, the os may be sufficiently dilated to accomplish the delivery of the child in a short time

Turning is most efficient, provided, the os is sufficiently dilated to proceed to it, and, the additional shock to the mother will not be too great. If it is a case of placenta previa this can be accomplished, in the usual manner, without much trouble. The best method is to separate the placenta from that part of the cervix to which it is least attached, and, by the bi-polar method bringing the foot of the foetus down, and thus, have an efficient plug to prevent further bleeding. After this has been accomplished, we should wait for uterine contractions and,

the completion of the case, in the usual way. The retraction of the uterus, usually present in (Placenta Praevia), effectually assists this method of accomplishing the desired object.

Separation of the placenta is the last method recommended. It has been chiefly recommended by Simpson, but, not in all cases. He recommended it particularly

, at "When the child is dead."

2nd "When the child is not yet viable."

3rd "When the hemorrhage is great, and the os uteri is not sufficiently dilated for safe turning"

4th "When the pelvic passages are too

small for safe and easy turning"

5th "When the mother is too exhausted to bear turning"

6th "When the evacuation of liquor amnii fails"

7th "When the uterus is too firmly contracted for turning."

Many objections to this method have been raised, and, in the above cases obstetricians would exclude this method of procedure. However, in some cases this seems to be the only resource left to the accoucher, and must be pursued. The danger in this method is that, the introduction of the hand into the uterus may be too severe a shock for

the mother.

If we find after the seventh month in Placenta Partialis, that, nature makes an effort to produce abortion, our best method is to assist her. If hemmorrhage has ceased by the time of the obstetrician's arrival, it is very unadvisable to make a per vaginam examination, for, the examining finger may displace the coagula of blood and thus induce fresh bleeding.

In Placenta Centralis, our best procedure is artificial delivery. The woman should be completely anasthetized before this is attempted.

in scarcely any other position in the practice of the art of obstetrics is the accoucheur in a more trying position, than when brought face to face with this phenomenon of nature. One misstep one wrong move, may be the herald of the patients death. His coolness in one place his boldness in another may be the salvation of the woman. It stands out boldly as one of the things with which the student of medicine must be acquainted, before he puts himself in the position to receive such a case under his care.

Thesis on Vanadia

W. S. Boyd Jr.

1886

Variola

From the close of the sixteenth century until the end of the eighteenth there was no acute disease more destructive to human life than Variola, but about this time the immortal Jenner discovered vaccination which has so far modified the disease that it need now scarcely be feared & if properly performed would place this disease among the things of the past.

Smallpox is an acute febrile contageous disease, attended with a period of incubation, and characterized, by a regular

order of symptoms & an eruption, which is first vesicular, then papular, then pustular.

Etiology.

Small pox spreads solely by contagion & the poison is probably contained in the pustules, & in the perspiration & breath of those having the disease. This is proved by successful vaccination with the contents of the pustules, & also, by persons contracting the disease without coming in immediate contact with those having it. The same poison

causes the severest forms of variola, & the mildest form of variola, depending solely on the susceptibility of the patient to the disease. Variolous poison is not soon destroyed, it will live for years.
Small pox is common to all persons alike, without respect to age or sex, except a very few who are exempt from the disease, but we cannot predict who those favored ones are.
It is most apt to occur in ~~Summer~~ Winter but it is by no means limited to any season.
One attack exempts from another

with few exceptions. The length of time after the reception of the Variola contagion, & the development of the disease is about twelve days, this is called the period of incubation, during which the patient presents no abnormal symptoms. Usually twelve days after exposure the patient begins to feel chilly; this feeling of chilliness increases until he has a distinct chill. This has been termed the initial stage.

Anatomical Appearances. The anatomical changes in the skin are those of a superficial

dermatitis with a suppurative tendency. In the mildest form of the disease, the suppuration is only of the rete Malpighii, in severer forms it attacks the tissue of the cutis & destroys it. It is only in the latter cases, in which pock marks are produced which last through life. Variolous dermatitis commences as a circumscribed hyperaemia of the skin, which extends through the cutis into the subcutaneous tissue. Very soon the papillae elongate & with the swollen cells of the rete Malpighii change

the hyperaemic spot into a sparsely bounded nodule, which is not yet excavated, contains no fluid, & is perfectly solid. As the process advances the outer layer of the epidermis is elevated by a vesicle, whose contents are at first clear, but soon become clouded with pus cells which change it into a pustule. These vesicles become multiliocated either by having a hair in the centre which holds the central part down, or by the fluid being extravasated farther around the periphery than in the centre. Some of the pustules

dry up & others burst & allow their contents to trickle out.
In patients dying from the disease, there is sometimes found fatty degeneration of the liver, kidneys, heart & muscles. The disease has been divided into different forms according as the pustules are separated by intervals, or touch each other, or unite together. These are called discrete, confluent & malignant or where hemorrhages occur hemorrhagic.

Symptoms & Course.

The period of incubation lasts about twelve days, & there are

usually no symptoms either in mild or severe cases.

The first stage commences with a chill which soon gives place to a permanent fever, & there are also severe pains in sacral & lumbar regions. Pulse is full & frequent & the temperature soon reaches 104° to 106° in it. a great thirst, loss of appetite & a sensation of fullness in the epigastrium. Tongue is coated, nausea & vomiting frequently present. There is also present at this period soreness of the throat more or less severe. Sometimes the patient becomes delirious. The fever usually attains its

height on the evening of the third day.

The second stage begins on the third day. In this stage the papules appear. There appear as little red spots scattered over the face, which feel like shot under the skin. The next day the eruption spreads to the neck & breast, and on the third day to the extremities. The papules are more numerous on the face than on the body. They gradually become large & blunt & on the second or third day after they are formed, change into vesicles & on the third or fourth day these

change into pustules. These changes occur later on the body than on the face, for the reason that the eruption appears later on the body. The fever & constitutional disturbance always subsides when the eruption appears. The third stage or stage of Suppuration. Begins about the sixth day after the appearance of the eruption. The pocks become larger & the skin around them swells & becomes dark red. Patients are greatly disfigured & complain of severe pain in the skin. The eruption on the mucous

membranes cause great annoyance. Swallowing is very painful, voice inaudible & eyes very sensitive to light. The fever exacerbates during this stage & is a true suppurative fever, sometimes this suppurative fever becomes dangerous, owing to the high temperature & it is frequently accompanied ~~with~~ with extravasations of blood. Such patients (with blood extravasations) almost always die early, with symptoms of great prostration. Sometimes Pneumonia occurs in this stage. The fourth stage or stage of exfoliation begins usually on the twelfth day. Part of the pustules

which have remained unruptured burst & their contents thrown out.
The other pocks become less dense & become brown & dry. As this goes on the swelling lessens & there is a very annoying itching.
When the crusts fall off they leave little red spots, which disappear after a time. When the scab remains for a long time little round cicatrices are left which remain for life. The fever moderates & ceases after a while & the patient enters on the stage of convalescence.

Confluent Smallpox.

This is a much more severe

form of the disease. The fever
of invasion is much shorter &
the emption spreads rapidly over
the body. The red spots which
mark the first appearance of
the emption are very numerous
especially on the face & hands
On the first day they are almost
confluent & on the second day
the skin is so thickly covered
that they rapidly unite & suppuration
speedily follows & soon the skin
of the face becomes so much
swollen that the patient is
unrecognizable. The emption
never becomes confluent on
the body except in limited spaces.

Desiccation is slowly reached. The pharyngeal inflammation is sub-mucous & is often accompanied with inflammation of the parotid & sublingual glands. The severity of the constitutional symptoms correspond with the severity of the local manifestations. Vomiting & diarrhoea are not infrequent & in all severe cases albumen appears in the urine. Complications occur more often than in the discrete variety & the most common are pneumonia, pleurisy & pericarditis. Hemorrhagic Variola is a modification of the other varieties, it differs from them in the appearance of the eruption

Sometimes the papules are hemorrhagic when formed, at other times they first become vesicles & then become hemorrhagic & sometimes hemorrhage occurs in the pustules. Sometimes the eruption becomes hemorrhagic over the whole body in other cases only in spots. Hemorrhage also occurs from the various mucous membranes. Patients with this form of small pox usually die before suppuration commences. When extensive hemorrhage occurs the temperature is often below normal & the pulse is very quick & feeble.

Differential Diagnosis.

Measels is most apt to be confounded with small pox. In measels there is a cough coryza sneezing & redness & suffusion of the eyes. These symptoms are not present in small pox. In small-pox, when the eruption appears the temperature falls, while in measels the temperature continues to rise after the appearance of the eruption. The vesicles in small pox are umbilicated. Smallpox may be mistaken for typhus fever but the appearance of the eruption on the third day settles the question.

Prognosis.

The prognosis depends on the amount of the eruption, the more abundant the eruption, the greater the danger to life. In the chicken pox form of - no complication arises the prognosis is very good. In the confluent form nearly one half of the cases are fatal, & in the hemorrhagic variety almost all die. The mortality is greatest in the old & in the very young prognosis is always bad in the intemperate.

Treatment.

There is no antidote to the disease after it has developed.

Place the patient in a well ventilated

room & keep the temperature of the room below 60°. When the body temperature ranges high you may employ cold to the surface & give antipyretic doses of quinine. It is advisable to give a gentle saline aperient at the commencement of the disease. For the inflammation of the mucous membrane of the mouth & pharynx you may syringe with a 5 gr. solution of potassium chlorate. If the diarrhoea becomes troublesome, astringent mixtures act best, such as chalk mixture & tincture of kino. Keep the patient on liquid food & milk is probably the best. In mild cases of this no

medicinal treatment is necessary.
Probably the best treatment to
prevent pitting is to rupture
the vesicles with a needle as soon
as formed & apply cold water dressings
every half hour.

There only remains for me to
mention a modified form of
smallpox which occurs in persons
previously vaccinated & not fully protected.
It is produced
by the same poison but is so
modified by the vaccination as to
run a much shorter & milder course

The prevention & treatment of
smallpox is by vaccination.

There are two methods of performing
it, one is to take the virus directly

from the cow, the other from a vesicle developed upon the human body, the former is probably the best & is now the one universally used. A primary vaccination should go through the following regular stages.

On the third day, at the point where the virus was introduced you should see a little red spot, by the fourth day this has become a vesicle, & on the fifth you notice a little yellow margin around the vesicle. The vesicle increases in size up to the eighth day, when it becomes umbilicated & has a distinct areola around it. Now the areola extends until it

measures an inch or two in diameter. It has now a deep red color. The arm is considerably swollen & very painful. About the eighth day the pustule matures & the swelling diminishes & in a few more days, the part heals. Vaccination should be performed on children between the ages of three & five months, and every six or seven years afterwards to insure complete protection.

Very Respectfully
W. H. Boyd Jr

Feb 14th '84

Diphtheria

Diphtheria [illegible] not a new disease is the subject of [illegible] [illegible] [illegible] and [illegible] [illegible] that it prevailed in epidemics even in the time of the [illegible] [illegible] [illegible] is not well understood.

Bretonneau dates its history back as early as the day of [illegible] [illegible] & [illegible]. It is said to have existed in Egypt as early as 100 A.D.; and in [illegible] 30 A.D. [illegible] it was [illegible] [illegible] Egypt. It was first written of America by Bard in 1798

[illegible]

[illegible]ation. Bretonneau call the [illegible] which [illegible] the term [illegible] theria about 1825. Since which time it has made its [illegible] welcome [illegible] home.

If the [illegible] attention to the fauces soon enough he will observe [illegible] [illegible] and [illegible] of the [illegible] the [illegible] Soon an exudation of lymph will be observed which is at first [illegible]

[illegible] the [illegible] [illegible]
lachrymal ducts, in the eye
along the whole length of the
Eustachian tubes & even [illegible]
the tympanum. It is also
sometimes found in the aesop-
agus larynx trachea and even
in the smaller bronchial tubes.
A mucous or excoriated surface
on any part of the body may
become the seat of a diphtheritic
deposit. The lymphatic glands
of the neck may become involved
during the progress of the di-
ease especially those at the an-
gle of the jaw. The amount of
pain swelling & tenderness of
the glands is a rare criterion.

[illegible] the [illegible]
[illegible] [illegible]
[illegible] [illegible]
spasmodic breathing & suffo-
cation. When it extends into
the bronchial tubes, the symp-
toms are, "diminished respiratory
murmur & embarrassment of
the respiratory function out of
proportion to the amount of
laryngeal obstruction with the
presence of moist bronchial
rales".

The symptoms relating to the
general functions vary with
the severity of the disease. As
a rule there is little fever 90°
or 100°. The pulse may be weak

irregular rapid or [illegible]
the normal. Death sometimes taken
place from hemorrhage but
generally from asthenia. Albu-
minuria is found very frequ-
ently. Except in grave cases
the mind is clear.
The disease occurs sometimes
in combination with scarlet
fever, measles or varicella. A
frequent sequel is paralysis
which may affect any part of
the muscular system but
its most frequent seat is
in the muscles of the soft, [illegible]
and pharynx. [illegible] the
[illegible] articulation, [illegible]
[illegible] deglutition [illegible] com

Patients generally recover from diphtheritic paralysis; but in rare cases it is permanent. Death may be caused by paralysis of the heart, muscles of respiration, or by foreign bodies entering the air passages.

Diphtheria seldom occurs except as an Epidemic. It is held by most writers that the disease is contagious but the point may be said to be sub judice. It has also been affirmed that it may be contracted from the lower animals which fact is probably undisputable

[illegible]
in low lying countries &
along the banks of streams.
Season has little or no effect
[illegible] the [illegible]
[illegible], it being sometimes
more [illegible] winter
than in Summer & vice versa
[illegible] has a certain
influence upon the [illegible]
ity of persons to the disease
[illegible] persons being [illegible]
susceptible than adult
and adult than [illegible].
[illegible] fact, it may be [illegible]
as a general rule, that the
susceptibility [illegible]
[illegible]

of diphtheria
[illegible] is rendered non-
geneous and gelatinous by
acetic acid — the [illegible] of [illegible]
[illegible] is hardened — In apply-
ing the last test the [illegible]
must be used

Prognosis

[illegible]
[illegible] differ in their
rate of mortality [illegible]
[illegible] has [illegible] often [illegible]
[illegible] with [illegible]
is [illegible] to [illegible]
[illegible] Corrigan [illegible] of the
percentage of deaths [illegible]
in an [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

applied with an atomizer [illegible]

hour. Chlorine water the proportion

of one to three, gargling with

a weak solution of Potasse chlorate

If there be any [illegible] Creosote

or Carbolic Acid may be used.

The following has been

much lauded:—

℞ Acid Carbolic ℥ss

Tannic Acid gr. 20

Tr Iodine ℥ss

Sig. Apply with camel's hair pencil every two hrs

In conjunction with this may

be used a gargle of Chlorate Potash every hour. [illegible]

[illegible]
Inhalations of medicated vapors at a temperature of 113° to 122° kept up until there is complete separation of the "[illegible] membrane". The inhalations are to take place every hour and kept up for about 15 minutes. Solutions of [illegible] anganate [illegible] of Carbolic Acid or the Oil of Thyme diluted with [illegible] [illegible] should be used every hour.

[illegible]

must be treated after the
nutritious and nourishing

Dudley W. Hall
University of Maryland
Medical Department
1886

Diagnosis of Variola

There is probably no disease by which humanity is afflicted, in which more depends upon a correct diagnosis than the one under consideration.

In no disease would the result of a wrong diagnosis be more disastrous to the patient, the welfare of the community would be endangered, and the consequences to the physician would be unpleasant to

say the least. If a case be pronounced small pox by the physician, and the patient is removed to a small-pox hospital, and the disease finally proves to be rubeola or varicella or some other of the diseases that small pox may be confounded with; the consequences to the patient may prove very serious; for if he be not protected from the variolous influence by vaccination, he will probably be subjected to all the horrors of the disease.

To the physician also the consequences are far from pleasant. If he had previously enjoyed the confidence of the community that confidence will be so shaken that it will be a considerable time before he will be reinstated in the public favor

The very nature of the disease renders it one which should not by any circumstance be confounded with diseases of a less dangerous nature

The extreme difficulty of

Diagnosing the disease in its first stage, especially where no satisfactory history can be obtained; renders the fact the more apparent that the physician should be thoroughly conversant with the points of differentiation between this disease and others with which it may be confounded

In this thesis I shall attempt, first to portray the various points diagnostic of the disease, and second, to take up separately the different affections from which it is to be

distinguished and delineate the points of differentiation.

A patient presents himself to us for a diagnosis, and from some cause we are led to suspect the existence of variola: The first thought that should suggest itself would be has the patient ever had the disease; If the answer is in the negative the next question would be, has he ever been vaccinated. These facts should be ascertained as a preliminary to the regular examination, for while the fact of the patient having

had the disease or having been vaccinated does not preclude the possibility of his having the disease at the present time, it renders it highly improbable. We should next endeavor to obtain some information in regard to the history of the case. First has the patient been exposed to the influence of the disease. and if so how long a time has elapsed since such exposure

We may next enquire how long the patient has suffered from his present indisposition. The facts ascertained

the various symptoms diagnostic of the disease should be sought for. The first of these which demand our consideration are the febrile symptoms consequent on the stage of invasion. Like most of the eruptive fevers the disease is generally ushered in with a chill, the chill being rather more marked in this disease, this is followed by fever, accompanied by perspiration. The fever is sometimes intense the thermometer showing a rise in temperature to 104 or 105 degrees. A diagnostic point

to be noted here is the continuance of the perspiration up to the maturation of the eruption which is not observed in any other of the eruptive fevers. This stage is accompanied by many of the symptoms which mark the invading stage of all of the eruptive fevers. The pain through the loins which is nearly always present is a point of value. The duration of this stage is generally 48 hours although there may be some variation.

The occasional occurrence of

a cutaneous efflorescence or rash prior to the true eruption will be spoken of when we consider the differential diagnosis from scarlatina.

At the close of the invading stage and just before the stage of eruption, occurs a phenomena which should not be overlooked, viz: the sudden diminution of the severe symptoms which marked the stage of invasion. The temperature falls and in some cases becomes nearly normal. The pains consequent on the high fever, and the nervous

symptoms subside, and the patient appears to be convalescent. But he enjoys this respite but for a brief season, he soon complains of soreness in the mouth and tongue, with ptyalism. his throat gets painful, his voice hoarse, with probably a more or less severe cough.

These symptoms are due to the involvement of the mucous surface of the upper part of the respiratory and alimentary tract. by the eruptive stage which is now coming on. If the physician

has been in doubt heretofore as to the nature of the disease, he can hardly be excused for failing to recognize it at this point provided he has had sufficient opportunity for observation.

The next symptom which demands our attention is the characteristic eruption, which generally makes its appearance first on the face, exceptionally however it is first observed on the loins.

As soon as the eruption is observed, the palate, mouth and throat should be

examined. the mucous membrane of which will be found covered with round opaque spots which soon terminate in little erosions and ulcers.

The cutaneous eruption appears first in the form of small red spots or specks having sometimes a purplish or livid color. The eruption is now said to be maculated. The center of the macule soon becomes hard, slightly raised and pointed, and the eruption is transformed from a maculated to a papular one. This stage of the eruption

presents a peculiar and characteristic feature. Viz. the peculiar feel imparted to the fingers when they are passed lightly over the skin where the eruption is making or has made its appearance. It has been described as feeling like shot imbedded in the skin

Soon a clear liquid becomes visible in the papule which is then transformed into a vesicle. The vesicle gradually increases in size until it attains to its full development.

It is now that we observe

the umbilicated appearance of the vesicle upon which so much diagnostic importance is placed by many medical writers. indeed some of them claim that this symptom is pathognomonic of the disease. But it has been clearly demonstrated and conclusively proven that this appearance sometimes occurs in the eruption of varicella as well as in some of the forms of skin diseases.

Besides, the lateness of the period at which this appearance takes place renders

it of much less diagnostic importance than some of the symptoms which appear earlier in the disease.

Having traced the disease to a point at which the lowest diagnostician can hardly fail to arrive at a correct conclusion, I shall next take up the differential diagnosis from various other diseases the first of which will be scarlatina. The cutaneous rash which sometimes appears in variola, prior to the true eruption, resembles somewhat the appearance of the

rash in scarlatina, but if on examining the patients throat the characteristic efflorescence of that disease will be found wanting. Also the shorter duration of the invading stage in that disease is a point of value. The cessation of the febrile symptoms which occurs in small pox just prior to the eruption, and which does not occur in scarlatina; and the appearance of the eruption of scarlatina on the body and upper extremities simultaneously with or before its appearance on the

face, renders the danger of confounding the diseases very slight indeed.

The danger of mistaking variola, especially in its modified form, for varicella and the latter for the former may be considerable, but here as in scarlatina we have the short duration of the stage of invasion. The mildness of the constitutional symptoms in this stage of varicella is also a diagnostic point. Again, the eruption of varicella is vesicular from the first, and appears first

on the body, and is apt to be more abundant there than on the face. The duration of the eruptive stage is less than in most cases of modified smallpox, and finally, traces of vesicles, are rarely found in varicella on the mucous membrane of the mouth and fauces.

The invading stage of measles is very different from that of variola. In the first place it occupies a much longer time, then the symptoms are very different

The coryza, frequent sneezing the acrid muco-serous discharge from the nostrils, with the reddened and irritable eyes in measles; renders the task of distinguishing this disease from variola comparatively easy.

If this case be seen for the first time at about the time the eruption first makes its appearance, there may be some difficulty in distinguishing between the two diseases. The eruption in both cases appears first on the face, and in the early stage there is considerable

resemblance the one to the other. But here the history of the case is generally sufficient to establish a diagnosis. If it is not, the eruption will soon put the matter beyond a doubt. For the eruption of variola is diffused much more quickly over the cutaneous surface, than is that of measles, and if it be variola, the transformation of the papulæ in to vesicles sets all doubt at rest.

If it be measles, the non-appearance of the vesicles, together with the larger size

softer appearance, and crescentic form of the papules will enable us to determine the fact.

The eruption in some of the forms of lichen bear some resemblance to that of variola, but we may safely say that the resemblance goes no farther, and in fact there is generally some distinctive point about the eruption which assists in a diagnosis, and the physician has little or no difficulty in excluding variola in these cases.

The fact should not be

forgotten that the use of tar
Wash of potash and antimony
will produce an eruption which
can scarcely be distinguished from
that of variola. Administered
internally in rather large doses
it produces an irritation of
the fauces, followed by aphthous
ulcerations very similar to what
is produced in variola.
Applied to the skin by fric-
tion it produces an eruption
which passes through all the
stages that the eruption of
smallpox does.
It is reported that a con-
demned criminal made use

of his knowledge of this fact to effect his escape, obtaining in some way a small quantity of the drug. He produced the eruption on himself which completely deceived the physician who ordered his removal to a hospital. During which time he easily made his escape.

Although the eruption produced by the drug so nearly resembles that of variola, the non appearance of the other symptoms of the disease must excite the suspicion of the physician, and careful inquiry will be sure to elicit such

acts, as will place the
matter beyond all doubt.

Intermittent Fever.

This is the more common of the three types of malarial fever, and may be defined as a specific non-contagious febrile affection caused by malaria; characterized by enlargement of the spleen and tendency to recurring attacks of fever, attended each with a cold, a hot, and a sweating stage followed by periods of apparently good health.

The recognition of intermittent fever is easy, and diagnosis need rarely be mistaken, since it is well marked by three distinct stages, following

First I would note that both latitude and altitude have much to do as modifying influences. The malarial zone extends northwardly as far as the isothermal line 57° Fahr., or to 63° North latitude.

It is the mean annual summer temperature however, which determines the northern limits of malaria, ranging each year, about the sixty-third parallel, while the mean temperature of the summer must reach at least 58° Fahr. to insure necessary warmth for the development of the specific poison; while

the [illegible] poisons [illegible] [illegible] [illegible] the system. The malarial districts generally present common, and very characteristic features: they are low-lying, or marshy, situated on or about rivers, or lakes or in the vicinity of some sea; usually productive of luxuriant vegetation, underlaid by an impervious clay or limestone subsoil, thus favoring largely decomposing vegetable substances. Marshes, [illegible] [illegible] common [illegible], and since [illegible] perspiration from the heat of a temperate or tropical sun.

while in temperate zones 500 ft. generally insures immunity. On somewhat similar grounds we are enabled to understand why some residences are constantly invaded by malarial influences, while others escape; why some rooms in the same building are freer from the virus than others. The lower to the soil the apartment, the greater is the exposure to the malarial germs arising from it. Then [illegible] a house placed on an elevation, or some mountain summit [illegible] its inmates almost, if not perfect, freedom.

since the locality, and his-
tory of the attacks will cause
the physician to think it of
malarial origin, and this being
decided, it must then be
determined which type of Malaria,
differentiating it from the
remaining forms, Remittent
and Pernicious Fever.
The distinction from each
of these is more in degree
than origin. Remittent Fever
being generally the first and
mildest form of the Malarial
Fevers; and distinguished from
Remittent Fever by its well
marked stages followed by Com-

[illegible] absence from febrile symptoms, with a return of the paroxysm at more or less [illegible] intervals and then the [illegible] and sweating stages. Intermittent Fever is distinguished from the malignant form of the same, by the continued and violent symptoms resulting from the commencement to end of latter; the paroxysms and stages being each more protracted and exhausting to patient in Pernicious Fever.

Symptoms.—

[illegible] well marked are the symptoms of [illegible]

is [illegible]. The pulse is
[illegible] and [illegible], strong
[illegible]. The bowels are consti-
pated and the skin still dry. The
urine in this stage becomes
more [illegible] of higher col-
or. The hot stage may last
from one to eighteen hours.
Third, [illegible]
the [illegible] stage.
This [illegible] gradually, the
[illegible] first [illegible] moist, then
the trunk, limbs and whole body.
There is a feeling of more com-
[illegible] the patient;
[illegible]
[illegible]

of the previous accurate symptoms is present; the patient falls to sleep and sweats profusely all over. With this, the chill symptoms gradually disappear, and the patient returns to, apparently, a good condition. Now comes on the period of intermission. This is the time elapsing between the end of one attack, until the beginning of the next paroxysm. The interval is the time from the beginning of one chill through the paroxysm and intermission to beginning of next attack.

The paroxysm is designated -
Quotidian, when it occurs
every day; Tertian, when every
other day and quartan, when
on the first and fourth days.
Mr. Pid Hertonby.-
There is in Intermittent Fever enlarge-
ment and softening of the Spleen
and some engagement of the liver,
with a pigmentary degeneration
of the blood corpuscles giving
rise to a yellowish deposit, stain-
ingly characteristic of this affection
Diagnosis.-
A child can only be pronounced
as malaria, but with the history of
the case and a sequence.

the attacks the diagnosis is easy. The differentiation is to be made from eliminating all other forms of malaria, traumatic and typhoid [illegible].

Prognosis.—

This is, under proper treatment, good, indeed. Very often stopping without medication, when the patient is strong and his appetite [illegible]. Death is [illegible] from [illegible] since the [illegible] of the [illegible] [illegible] back. It is the [illegible] form of [illegible] which [illegible] most destruction to life, while Intermittent is generally amenable to easy treatment.

Treatment:

Cinchona, [illegible] it [illegible] by [illegible] [illegible]. Of the several Cinchona alkaloids the sulphate of Quinia is most [illegible].

The best time for administering quinine for its antiperiodic effects is just at the [illegible] of the [illegible] and at the [illegible] of the period of intermittency give [illegible] xv, [illegible], with a second dose, a couple of hours before time of expected attack. If such is not sufficient we increase the amount, and [illegible] of doses.

It often happens that the period of intermittency is [illegible], and the [illegible] [illegible]; [illegible] Con-

verted into tertian - or tertian into 7th 14th or 21st [illegible].

In such cases [illegible] to give quinine in doses of X - XV grs. [illegible] during the period of intermittence, and on the day of expected chill increase the dose and give it in time to be absorbed before the recurrence is to be expected.

[illegible] administering quinine [illegible] average case of intermittent fever [illegible] as. It not [illegible] happens [illegible]

Warren Co. N.C.

universally employed than Opium -
It has afforded more relief from suf-
fering than any other remedy, but has
at the same time, been productive of much
evil - even in the hands of Physicians -
That terrible disease, the "Opium habit"
which has increased so rapidly as to have
required, in many sections of our country,
the enactment of laws for its prevention
can often be traced directly to the

this remedy, and to be exceedingly cau-
in his use of it - otherwise he may

Opium is the concrete juice of the

[illegible]

in the yearly importation of the drug

[illegible]

proportion to the increase in population -

[illegible]

[illegible] Eaters & Smokers are in-

[illegible]

[illegible] is found in commerce in in-

[illegible]

[illegible]

The alkaloids of opium are numerous not less than eighteen according to some - to which Morphine is the most important, and it is on the quantity of this [illegible] value of opium is based - The U.S. Pharmacopoeia requires that dried opium shall contain not less than 12% of Morphine.

The principal Officinal Preparation [illegible]

[illegible] contains 10 parts of powdered opium and a sufficient quantity of diluted [illegible] fzi of this tincture contains about [illegible]

[illegible] when prepared by regular pharmacists and much of that found in country districts, being furnished by wholesale grocers to country store-keepers at a price [illegible] it should contain, is not only worthless, as a remedy, but very dangerous - in that those accustomed to using it may [illegible]

This is a very excellent preparation of the opium strength of laudanum less the narcotine which is removed by means of ether - The offensive odor & taste of laudanum being also absent, it is

[illegible] other [illegible] the stomach [illegible]
[illegible] tincture, and has in a great
[illegible] superceded it with physicians

Tinctura Opii Camphorata –

This is the well-known Paregoric, and contains a little less than 1 grof opium [illegible]

acid and oil of anise – Its principal [illegible] is in the diseases of children, being the favorite domestic remedy for the many disorders incident to infancy –

It is also very useful in many [illegible] [illegible] and is an important ingredient in that very valuable cough mixture, Mistura [illegible]

[illegible]

[illegible] to eight parts Milk Sugar.

The substitution of sugar of Milk for [illegible]

[illegible]

ation of such well-deserved reputation.

[illegible]

[illegible] combined action of an anodyne and [illegible]

The Aromatic Chalk Powder with [illegible]

[illegible] in the [illegible] of [illegible]
[illegible] as it does the [illegible]
opium with the antacid and ax-
[illegible] of [illegible]
[illegible]
[illegible] though not officinal with us, well
deserves consideration —

There are many other preparations of opium, officinal & unofficinal of more or less value, but those men-
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] on the [illegible]
[illegible]
[illegible]

[illegible] Alkaline [illegible] and Gallic Acids, the metallic salts and [illegible] ically incompatible with opium but [illegible] in combination with it.

The action of opium is very much [illegible] conditions - Young children are very susceptible to its action, and great care is necessary in administering it to them [illegible] in a great measure to their more delicate nervous organization - Quin remain one much less susceptible to its influence. And idiosyncrasies are frequently met with which altogether [illegible]

[illegible]

[illegible] canal and therefore causes dryness of the mouth [illegible]

[illegible]

vice, and also a lessening of [illegible]

[illegible]

[illegible] more or less profound which is usually followed by a condition [illegible]

[illegible]

site effect so far as sleep is concerned. The action of opium in lethal doses has already very referred to —

As to the therapy of opium — it has a very wide field of usefulness — There are few dis-

[illegible] in some stage of which is
not [illegible].

[illegible] pain from whatever cause. Mr
Phine is first thought of, and
its aid is almost invariably in-
voked, and rarely does it fail to
relieve or, at least, mitigate
[illegible]

In most cases of nausea and
vomiting, especially when proceed
[illegible]

valuable agent we have, but is
[illegible]
with other remedies — most often
with astringents. The [illegible]
[illegible]

[illegible]

[illegible]

complished so long as the cause

[illegible]

"In that most distressing com-

[illegible]

Podermic of Morphia, in the

vast majority of cases acts like

[illegible]

Opium [illegible]

patient in a state of collapse

as it will [illegible]

[illegible] especially [illegible]

[illegible]

narcotism when the process

[illegible]

[illegible]

[illegible] have in the treatment of

[illegible] [illegible] [illegible] [illegible]
[illegible] of [illegible] [illegible] and [illegible]
[illegible] transudation and migration of
white corpuscles through their walls.
On account [illegible]
[illegible] [illegible]
opium is an agent of great
[illegible]
[illegible]
Among the many other diseases in
[illegible]
[illegible]
[illegible]
[illegible]
by lesions of the brain, and pu-
erperal convulsions — It prolongs
the stage of chloroform narcosis
[illegible]

[illegible] Paralysis and
[illegible] the [illegible] after-
Externally Opium is much
[illegible] inflammatory and painful
[illegible]
[illegible] most constant ingredient in
[illegible]ments when a soothing effect
[illegible] desired — Morphia was formerly
[illegible]ch used in painful eye
[illegible]
[illegible] a great measure, [illegible]
the [illegible] of cocaine —
[illegible] after-effect
of Morphia may be in a great
measure [illegible] by combining
it with atropia —

Bronchitis

By the term bronchitis is meant inflamation of the lining membrane of the bronchial tubes. The disease varies extremely in regard both to the degree and extent in which the tubes are involved. In its mildest form the larger tubes only are affected the mucous membrane being but slightly congested and thickened giving the patient very little annoyance and

usually resulting in complete recovery within a few days.

Again the disease may affect the smaller bronchii exclusively though as a rule the inflamation extends from the larger tubes down to the smaller and may involve both to a very intense degree, presenting one of the most troublesome and dangerous maladies.

Bronchitis occurs either primarily or secondarily. The disease primarily is dependent on exposure to cold and more especially to sudden changes of temperature.

It prevails to a much greater extent and with greater fatality in Spring and autumn.

It is more liable to attack children and old people, though it affects persons at any stage of life, especially those of feeble constitution and more especially those who have suffered from a previous attack.

Certain irritant gasses when inhaled will produce the disease especially chlorine gas. The constant exposure to dust or fine particles of metal, cotton or woolen fiber is liable to produce bronchitis by acting as traumatic causes of inflamation

Bronchitis occurs secondarily as a sequel or complication of some other disease. It often accompanies pulmonary phthisis and not unfrequently follows or complicates typhoid fever, measels and pneumonia.

In phthisis it usually involves only the bronchial tubes of one side and may even be circumscribed as is the case in pneumonia. In most other diseases it occurs bilaterally just as it occurs primarily, involving both lungs to the same degree. Bronchitis belongs also in the clinical

history of various affections of the heart and kidneys and perhaps to that of carcinoma, syphilis and gout.

The disease occurs either primarily or secondarily on nearly every part of the globe. but is much less frequent in tropical countries than in the cold, and less frequent in very cold climates than in temperate climates which are subject great and sudden changes in temperature.

There are four different forms of this disease (most commonly met with viz; accute, chronic, capilary and croupous. I shall in this paper attempt to give a brief account of the history and cause. together with the diagnosis, prognosis and treatment of the accute and chronic forms, afterwards considering some of the most prominent signs and symptoms of the two later forms.

Accute Bronchitis.- usually begins in the upper part of the

respiratory tract. The patient may complain of having taken cold, with perhaps a slight sore throat which may be felt only in the act of coughing, hoarseness and a general feeling of malaise. The inflamation following the lining membrane of the larynx and trachea down to the bronchial tubes. The symptoms then vary somewhat in proportion to the intensity of the inflamation there may be slight elevation of temperature, usually little or no disturbance of respiration.

The most troublesome feature being a cough, which is at first dry and unattended with much expectoration. Afterwards the discharge becomes more profuse. The cough is said to be "loose" and the patient is able to expell a quantity of thick glairy mucous, sometimes becoming muco-purulent. The cough then gradually becoming less frequent and followed by greater relief.

In mild cases the patient may not necessarily be confined to his bed or even to his room during the whole course of the disease,

In severe cases the symptoms are very much more aggravated coughing becomes more frequent the paroxysms giving rise to considerable discomfort. Pain is felt in the muscles of the chest. The epigastric region becomes very tender so that the act of coughing gives rise to severe pain. In feeble persons and especially in infants and the aged the mucous secretion may be so profuse as to embarrass respiration. The bronchial mucous membrane is usually very irritable with a sense of rawness and burning in the throat and chest.

The attack may be though rarely is accompanied by a distinct chill. Generally there is a sense of chilliness followed by flashes of heat which tend to recur at intervals throughout the course of the disease. The pulse becomes accelerated the temperature elevated. The respirations somewhat hurried. inspirations requiring a slight effort while the expirations are prolonged. An ulcerative process sometimes takes place. especially when the disease is complicated with phthisis. The cartilages may be destroyed either by necrosis or caries. the destructive process extending even into the surrounding lung tissue.

The patient often complains of headache and drowsyness, poor appetite, and thirst with furred tongue and scanty and highly colored urine. The disease may be said to have two stages viz: the dry and the moist. The auscultatory signs differ somewhat in the two stages. In the early stage the sounds are sonorus or blowing rales in the larger tubes and a hissing sound or sibilant rale in the smaller. In the moist or later stage we have the moist or bubling sound the rale muqueux and the "rale sous crepitant"
The sound on percussion is usually

clear and resonant. In exceptional cases where the secretion is very profuse there may be a certain amount of dulness. No portion of the lung is entirely withdrawn from the exercise of its function as is the case in pleurisy and pneumonitis. Another point of contrast between the two latter diseases and bronchitis is the law of parallelism which characterizes bronchitis occuring primarily. If from profuse secretion and thickening of the mucous membrane the aeration of the blood be diminished the temperature may be reduced even below the normal. the hearts

action will be enfeebled and nutrition impaired. The face become pale and livid. The mental faculties disturbed even to delirium and coma.

Chronic Bronchitis:- Bronchitis may be subacute from the beginning. though the acute form often becomes chronic. especially in those persons who are repeatedly exposed to influences which tend to bring on an acute attack. and subsequent attacks are usually induced by very slight provocations. The disease may be associated with other pulmonary trouble. or with cardiac disease

The symptoms in chronic bronchitis differ from those of the acute form but little except in degree of intensity There is rarely any febrile disturbance. A condition termed bronchiectasis or dilitation of the bronchial tubes often accompanies the chronic form in consequence of ~~the~~ a destructive change in the elastic fibers of the bronchial walls. This change is usually due to other pulmonary affections which cause dispnoea as. emphysema or fibroid phthisis Chronic bronchitis nearly always

assumes a sort of remitent
character, the patient being
comparatively free from it
during the summer months
with the return of symptoms
as the winter approaches.
The exacerbations gradually
becoming more marked and
the remissions shorter.
The patient is soon troubled
with shortness of breath.
More or less cough always exists.
The bronchial secretions
consist principally of mucous
with serous exudation. When the
discharge is of a serous character
and very profuse it is termed
bronchorea

The disease however may be attended with but little serous exudation the discharge consisting of solid yellowish masses which are expelled only by considerable coughing. This condition is called dry bronchitis.
Another condition is met with in which the expectorated matter has a peculiar fetid and very disagreeable odor This condition has been termed fetid bronchitis and is chiefly incidental to dilitation of the bronchial tubes. Though it may be dependent on a gangrenous condition.

Another condition called plastic bronchitis is met with which will receive further notice under the head of Croupous bronchitis. It is characterized by the expectoration of laminated casts of the bronchial tubes due to a diphtheritic process which forms upon the mucous membrane of the tubes. the cause and pathology of which are alike unknown.

Diagnosis:- The only diseases with which acute bronchitis is liable to be confounded are pleuritis and pneumonitis. Having the clinical history

we may be enabled to arrive at a correct conclusion by noting the absence of certain characteristic symptoms which belong to the two later affections. Such as the crepitant rale, tubular respiration, the rusty color of the expectorations, the marked febrile movement, increased respirations, bronchial breathing, bronchophony &c. all of which are symptoms that do not belong strictly to bronchitis. If the pain is of an obtuse character and felt more especially, beneath the sternum we know that the pain in pleurisy and

~~pulm~~ pneumonitis is apt to be sharp and lancinating and referable to one side or other, or to a circumscribed area near the nipple.

In chronic bronchitis the diagnosis involves discrimination from pulmonary phthisis. The symptoms belonging to this form are very much the same as those of the acute form especially where the former presents exacerbations. The differential diagnosis should be based on the absence of such symptoms as belong to phthisis. The auscultatory, percussive and tactile phenomena are very similar.

Progressive emaciation and loss of strength, hectic fever and haemoptysis are symptoms belonging to phthisis and are not observed in Chronic bronchitis.

Prognosis:- In acute bronchitis unattended by complications the prognosis is favorable except as it occurs in very young children or very old people, in whome if the bronchial accumulation be profuse the inability to expell it may occasion fatal dispnoea. If it be associated with certain other affections such as emphysema it may again prove fatal in the same way.

The accute form may become chronic: in which case convalescence will be delayed a very long time or terminate in death from asphixia in connection with the asthmic condition.

Treatment:- Ordinary accute bronchitis is a very common disease and often presents such a mild form as to call for but little or no treatment further than the strict observance of good hygienic rules. Persons subject to bronchitis should wear flannel next the skin and if not confined to the house should be provided with sufficient clothing to protect them against the vicissitudes of weather.

An accute attack may often be
prevented on the appearance of
coriza or even aborted if the
bronchial tubes have already become
involved. by the use of the hot
pediluvium together with a full
dose of sulphate of quinia or
Dovers powder. or a large whisky punch.
The inhalation of steam either
simple or medicated with volatile
aromatic or sedative substances. such
as turpentine, camphor or conium.
Counter irritation by mustard
plasters. Depletion by saline purgatives.
On severer cases where the patient
is full blooded and the symtomatic
fever considerable. The abstraction

of blood from the surface of the chest will relieve pain as well as the congested and swollen condition of the bronchial membrane. Tartar emetic, antimony, Opium and squills are very valuable remedies in this disease. If a gouty history is found with the patient the antigout treatment will be indicated.

If the disease tends to become chronic the use of tonics such as Quinine & Iron with stimulant medicines and nutritious food would be the proper treatment.

Capilary Bronchitis:- This form is applied to that form of the disease in which the small or medium sized tubes are mainly affected. This is an exceedingly grave form of the disease. It proves fatal in a large majority of cases especially in children and in old age. The general symtoms are of a more intense character than in the ordinary form. and the congestion and mucous secretions may entirely close up the tubes. It is more liable to be confounded with pneumonitis and pleurisy than any other diseases.

The differential diagnosis is the same as in the other forms of the disease which have been discribed. we must however take into consideration the greater intensity of the symtoms. the diagnosis involving perhaps a somewhat closer discrimination than in the other forms of the disease. Pneumonia is usually developed quicker and without so great disturbance to respiration, and is usually unilateral. Broncho. Pneumonitis may supervene as a complication to capilary bronchitis. The unusually high temperature with perhaps the crepitant rale would lead us to suspect the existence of the former disease

In Capilary bronchitis the pain is comparatively small even in the act of violent coughing. The respirations are labored and the countenance has a livid appearance.
Treatment- The patient should be kept in a room in which the temperature could be well regulated. The temperature being kept at about 85° and a sufficient amount of moisture maintained by the use of steam. The strength of the patient should be sustained as much as possible. The Iodide of potassium should be given in full dose. In children emetics should be given to promote the

expulsion of the accumulations. care being taken not to repeat them often enough to bring about exhaustion and thereby decrease the power to over-come the difficulty of respiration already existing.

Croupous Bronchitis:- This form of bronchitis is very rare and there are no symtoms or signs by which it can be distinguished from other forms of the disease except by the character of the expectorations which consist of fibrinous casts enveloped in a thick mass of mucous.

These casts represent the small tubes and their ramifycations. They are distinguished from the

casts formed in case of bronchorhœa by the absence of blood corpuscles. This disease may complicate a similar disease of the Larynx and Trachea known as true Croup. Sometimes occuring also in diphtheria. In croupous bronchitis violent coughing always precedes the expectoration of the characteristic casts. and is generally followed by profuse discharge of mucopurulent fluid and by the relief of symptoms. The treatment of this form of bronchitis does not differ from that of other forms already considered. The inhalation of steam and the use of tartar emetic or of opiates will perhaps be found most serviceable in bringing about the expulsion of the false membrane.

An essay on the subject of

Bronchitis

Respectfully submitted to the faculty of The University of Maryland.

Feb. 1885.

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Pneumonia – Pneumonitis.

Definition.– An acute inflammation involving the alveoli of the lungs. It has been designated "croupous", "fibrinous", or "exudative" pneumonia. It differs from the catarrhal form in the seat and character of the inflammation, and it occurs as an independent disease, while catarrhal pneumonia generally arises from some previous existing disease of the lungs.

Aetiology and Pathology.– Predisposing causes.– Age seems to have some influence in the causation of this affection, most cases occurring before the age of 40; but no age is exempt. Females are less liable to be attacked, because they are not so continually exposed to the exciting causes: Occupation, habits and

occupation have much to do with the causation of this disease. The poor, badly fed, improperly clothed, those broken down by intemperance or those whose occupations involve much exposure are more liable to be attacked. Pneumonia is liable to occur in those who are constitutionally weak, or in those suffering from any accute or chronic disease, or in those just convalescing from any accute disease. Climates characterized by coldness, changes in temperature and much moisture, predispose to pneumonia. Previous attacks are said to increase the liability to the complaint.

Exciting causes.— Accute pneumonia generally arises from a cold, induced by exposure to draughts when the body

is heated; or to exposure to cold or wet weather. Another cause of pneumonia is direct irritation, due to the inhalation of certain gases; or to the passage into the lungs of foreign bodies as particles of food; or to apoplectic clots. Perforating wounds of the chest; or injury to the lungs from fractured ribs are not unfrequent causes of pneumonia. Pneumonia is liable to arrise during the course of the acute febrile diseases, especially typhoid fever, measles, small-pox, and pyaemia. Long continued congestion from heart disease will set up pneumonia. Pneumonia is regarded as a specific fever of which the lung inflammation is but a local manifestation, an has lately been attributed to a specific poison;

but this is only theoretical. There seems not to be any relation between the severity of inflammation and general symptoms. There may be great or small disturbance when only a small portion of the lung is involved; and, again, there may be extensive inflammation with very little general disturbance.

Pathological Anatomy.—Acute pneumonia is characterized by hyperæmia and oedema of the lung tissue, followed by an exudation of a fibrinous material into the air vesicles and minute bronchi, which material soon dies or later undergoes various changes. The process is described as consisting of three stages. First, the stage of engorgement.

Second, the exudative, or stage of red hepatization. And third, the stage of grey hepatization.

Stage of engorgement.— In this stage the lung substance becomes consolidated, assumes a dark red color, its specific gravity is increased; its elasticity diminished; it is more friable and less crepitant than in a normal condition, and sinks upon immersion. It still contains some air, however, and will therefore, float upon water. On section, the divided surfaces present oozing from them a reddish, frothy, bloody fluid; and the epithelium lining the alveoli are found to be swollen.

The second or stage of red hepatization

The second or stage of red hepatization is characterized by the exudation of liquor sanguinis, and by emigration of white corpuscles, into the pulmonary tissue. The exuded material coagulate within air vessicles, and terminal bronchioles. The specific gravity of the lung is increased still more than in the preceding stage, The size of the lung is increased, and its surface is marked by the ribs. If now a piece of the lung be thrown upon water it sinks, not containing any air, being very friable and non-crepitant. On section the lung substance presents a granular appearance, due to the lungs coagulated material filling up the alveoli.

The color of the lung is now a dark brown, running into grey here and there. There appears to be little or no change in either alveolar walls or in the epithelium during this stage. The pleura frequently participates in the inflammatory process, and it is then by peracute, opaque, and coated with lymph; and the disease is then called pleuro-pneumonia. Third or stage of grey hepatization.— This stage is characterized by a continuation in the migration of white corpuscles; by changes in the epithelium lining the alveoli; and by further changes in the exuded material. The white cells continuing to escape completely fill

the alveoli; and the exuded material now begins to disentegrate, & the cells undergo fatty degeneration, and have, in many parts lost their distinctive outlines. Simultaneously the epithelium lining the alveolar walls become swollen, and granular. The alveolar walls themselves, preserve their integrity; but occasionally they ~~also~~ are destroyed, and an abscess is formed. The weight, density and friability are increased still more than in the previous stage; and cut surfaces exude a purulent fluid. The color changes from a dark brown to a yellowish white or grey. This change in color, is due partly to pressure of the exudation

upon the blood vessles; and partly to the fatty degeneration which the expudation has undergone. These three stages do not always occur throughout the whole substance of the involved lung, in the order in which they have been described, but advance irregularly; so that while one portion is in the second stage, another may be advanced to the third, while still another has only arrived at the first. The rapidity with which these stages succeed each other is variable. The portion of the lung most frequently involved is the right lower lobe; next in frequency, is the left lower; next the upper lobe of the right.

The middle lobe of the right is said to be least frequently of all involved. Double pneumonia is less common than single, and usually attacks old subjects. While these changes are taking place in the lung, there is overloading of the venous system, and the right cavities of the heart are distended, and coagula are liable to form in the heart.

Terminations pneumonia. — This disease may terminate in five ways. First, by resolution which is meant the return of lung to it normal condition, is fortunately the usual termination of pneumonia. The exuded material undergoes either fatty or mucoid degeneration,

and is absorbed; the blood vessels return to their normal condition; and circulation through the part is established. Second- In abscess. This is a rare termination of pneumonia, and usually occurs in those cases which are surrounded by unfavorable hygienic conditions, or when the previous condition of the patient is bad; or when the other lobe is the portion involved.

Third- In gangrene, which is also a rare termination, and is mostly seen in those who have been previously debilitated. There are two conditions which are chiefly concerned in producing gangrene. One is the cutting off

of the blood supply from the part by thrombi being formed in the pulmonary and bronchial vessels, and by haemorrhage taking place into the pulmonary tissues. The other is the presence of septic inflammatory products. Fourthly, we may have cases of pneumonia terminating in purulent infiltration in which the exudation has undergone suppuration, and has not been absorbed. Fifthly, pneumonia may terminate in chronic interstitial pneumonia.

Symptoms:— About three quarters of all cases come on suddenly. Children especially are liable to be suddenly attacked.

Usually there a chill which is more prolonged than that of any others except those of malaria and pyaemia. This initial chill may be then said to be indicative of pneumonia. In children this disease is sometimes ushered in by convulsions. Pain, usually about the mammary region, comes on almost simultaneously with the rigor. Its is, described as being stabbing and piercing in character, and its intensity is increased by a deep breath and by coughing. Dyspnoea is an early and a prominent symptom. Dyspnoea does not bear any relation to the extent of the inflammatory process going on in the lung, but rather to the rapidity with which the inflammatory process sets in.

In the incipiency of the disease there may be violent dyspnoea; while later, on, when the inflammation has spread over a large area of the lung, dyspnoea may be very slightly marked. Fever sets in immediately after or during the chill. The temperature may rise to 103° or 104 or even higher. The skin is dry and hot. Sometimes perspiration takes place but the patient experiences no relief. Cough comes on soon and is short hacking and difficult to repress. The tongue is white and furred. Vomiting and occasionally diarrhoea and jaundice are present. Situated immediately over the malar bone there is circumed redness, which may be bilatteral; but is most frequently unilatteral

and on the right side, which corresponds to the right lung which is more frequently the seat of the inflammation. This redness is said to be bilateral when both lungs are involved, and its darkness in color is said to bear a relation to the extent of the inflammatory process. The respiratory movements are increased out of proportion to the pulse rate. The pulse may be 100 per minute, while the respirations are increased to 60, 70 or even 80 per minute. Frequently, but not invariably, there is a morning remission in the temperature. The temperature generally reaches its maximum on the second or third day; but may continue to rise until the termination of the disease. In a large proportion of cases it does not

rise above 104°; but may reach 110° or even higher. The temperature is generally lowest early in the morning, and continues to rise, attaining its maximum early in the evening, and then begins to fall. It may then rise about midnight after which it again falls. When in rare cases, pneumonia is associated with malaria, the temperature becomes normal in the in the morning. The pulse may vary from 90 to 120; is at first full and strong, but becomes weak, irregular, and intermittent. The sputa is viscid and adhesive, and discharged with much difficulty, and if put into a vessel will not run out when the vessel is inverted. When the diseases reaches the second stage there is a characteristic

color of the sputa, resembling much the color of prune juice. This color of the sputa is pathognomonic of pneumonia. Cerebral symptoms are not characteristic of pneumonia. There may be headache, restlessness, insomnia, and delerium; the latter two symptoms being most frequently met with in drunkards. The urine is febrile, contains a little albumen, and the chlorides are absent. In severe cases the symptoms assume an **adynamic** character. The tongue is dry and brown; low nervous phenomena, as delerium, coma, & convulsions set in. Disorders of the sheculences also set in. This condition is then called "Typhoid pneumonia." This condition is most likely to occur in

subjects; in the intemperate debilitated; when the disease is secondary to other diseases, as typhoid fever, smallpox, &c; when there is very high fever; and when the inflammatory process terminates in suppuration or in gangrene.

Physical signs.—Engorgement stage. There is impaired motion on the affected side. The vocal fremitus is a little increased. There is dullness on percussion. The respiratory murmur is a little feeble. The crepitant rales which is characteristic of pneumonia is heard. The crepitant rales resemble the sound produced by rubbing a lock of hair between the fingers, or that produced by turning out the sound is said to be due to the opening

of air vesicles or to minute excavations of the pulmonary tissues. The sound is heard during inspiration, and its intensity is increased by taking a deep breath. It is generally heard from the first to the third day; or it may be altogether absent when the second stage sets in rapidly. It is confined to children. Stage of red hepatization. The respiratory movements are still less frequent than in the preceding stage. Vocal fremitus is greatly increased; but it may be absent when pleurisy complicates pneumonia. This is because the fluid which exists in the pleural cavity is not so good a conductor as the consolidated lung. There is dulness on percussion over the

inflamed area; while over the healthy lung substance there is increased resonance. Bronchophony is a characteristic sign of this stage. Stage of grey hepatization.— Until resolution has begun to take place, the signs of the of the preceding stage are present. Then the signs become less marked, crepitus lasting longer than any other. Should the case terminate in gangrene the signs of a cavity will be present.

Diagnosis— Pneumonia has to be distinguished from congestion & oedema of the lung, pleurisy, bronchitis, meningitis, typhoid fever and acute phthisis.

Congestion & Oedema.— Congestion & oedema usually bilateral; pneumonia usually unilateral. There is no chill in the former

while in the latter this is always present. There is no elevation of temperature in the former, while in latter fever runs high. The character of the sputa will farther serve to distinguish the two affections.

Pleurisy.— The temperature is much lower in pleurisy than in pneumonia. There is little or no expectoration in pleurisy. The countenance in pleurisy is ghastly pale; while in pneumonia there is that characteristic redness over the malar bone. The friction sound is absent in pneumonia. There is no crepitant rale in pleurisy. Vocal fremitus is diminished in pleurisy, and increased in pneumonia.

Bronchitis.— Bronchitis commences with chilliness which lasts for several days; while pneumonia is ushered in

by a distinct and severe rigor. In bronchitis the fever is of moderate height, while in pneumonia fever runs high. The fever of bronchitis declines gradually, while that of pneumonia declines suddenly. The character of the sputa is different in these affections. Meningitis.—Cerebral symptoms are more marked, and there is slowness of the pulse from the beginning of the attack. In pneumonia the pulse is at first full and fast. The physical signs, characteristic of pneumonia, are absent in meningitis.

Typhoid fever.— Typhoid fever sets in gradually; pneumonia, suddenly. In typhoid fever there exist rose and diarrhoea which are rarely seen in pneumonia. There is a characteristic eruption

in typhoid fever. There is also in typhoid fever pain in the right iliac fossa. Neither of the last two symptoms are present in pneumonia. The course of temperature in typhoid will farther serve to distinguish these diseases. Again, in typhoid the rusty sputa is abscent.

Acute phthisis — In phthisis there is no initial chill. The fever is more of an intermittent than that of pneumonia. The sputa of phthisis consists of mucopurulent matter with blood clot irregularly disseminated through it; while the sputa of pneumonia is uniform throughout.

Prognosis — The circumstances which render the prognosis unfavorable are very early or advanced age; the female sex, especially during pregnancy; the presence of any

pulmonary, cardiac or renal disease; the sputa being very abundant or inability of the patient to expectorate, very high fever and signs of failure of the heart. The favorable signs are the continued fall of the pulse; the increase [illegible] followed by diaphoresis, and diuresis; and the return of the chlorides in the urine.

Treatment.— At the beginning of an attack, [illegible] the child is still upon the patient, the last course to pursue is to give [illegible] X–XIII of Magendie's solution of morphine. This [illegible] [illegible] [illegible] [illegible] for the patient, [illegible] does not cut short the attack. At the same time a full dose of [illegible] should be [illegible] [illegible] the stage [illegible]

Neutrum [illegible] are [illegible] &c; but as the chief danger in pneumonia is failure of the heart, it would certainly be injudicious to administer these drugs as a routine practice. After the exudative stage has set in, there are no drugs which have any influence over the disease; but the indications then is to promote expectoration and to sustain the strength of the patient. The first of these indications is best carried out by the administration of alkalies, the best of which is the carbonate of ammonium which may be given in doses of grs V. every three or four hours. The acetate of potash is also a good remedy during this stage. Sedatives are not to be given; because the heart is already depressed by the

effort to drive the blood through the solid portion of the lung. The sulphate of quinia is probably the most efficacious drug that could be employed throughout this and the following stage of the disease. While its influence over temperature is equal to, if not greater, than any other, it is also useful from its tonic effect. When the heart is weak and intermittent alcohol may be given; but its effects should be closely watched. About the time of the crisis the heart is liable to be weak, and then the carbonate of ammonia may be given along with the alcohol. The patient is generally restless at night, and then chloral and opium may be given. Or what is still better chlorodine as it has less

tendancy to sedate the heart. Should resolution seem to take place slowly, it may be hastened by the application of a turpentine plaster to the breast. Of course all hygienic measures should be strictly carried out, and the patient should have nutritious and digestible food. During convalescence iron and codliver oil may be given; and the patient should not be exposed to to changes of weather until his health is completely restored.

Written by Wm. H. Wolfe.

1886